

The 21st Century Cancer Care Wellness Facility:

A Study, Interpretation, and Application of 16th Century Japanese Teahouse Themes

Shaun Christopher Coffey

Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Master of Architecture
in
Architecture

Jaan Holt, Committee Chair
Marcia Feuerstein
Randall Mars

December 15th 2014
Washington Alexandria Architecture Center
Alexandria, VA

Keywords:

Teahouse, cancer care center, health care, sequential experience, Japanese architecture

Copyright 2015 by Shaun Christopher Coffey
All rights reserved

The 21st Century Cancer Care Wellness Facility:

A Study, Interpretation, and Application of 16th Century Japanese Teahouse Themes

Shaun Christopher Coffey

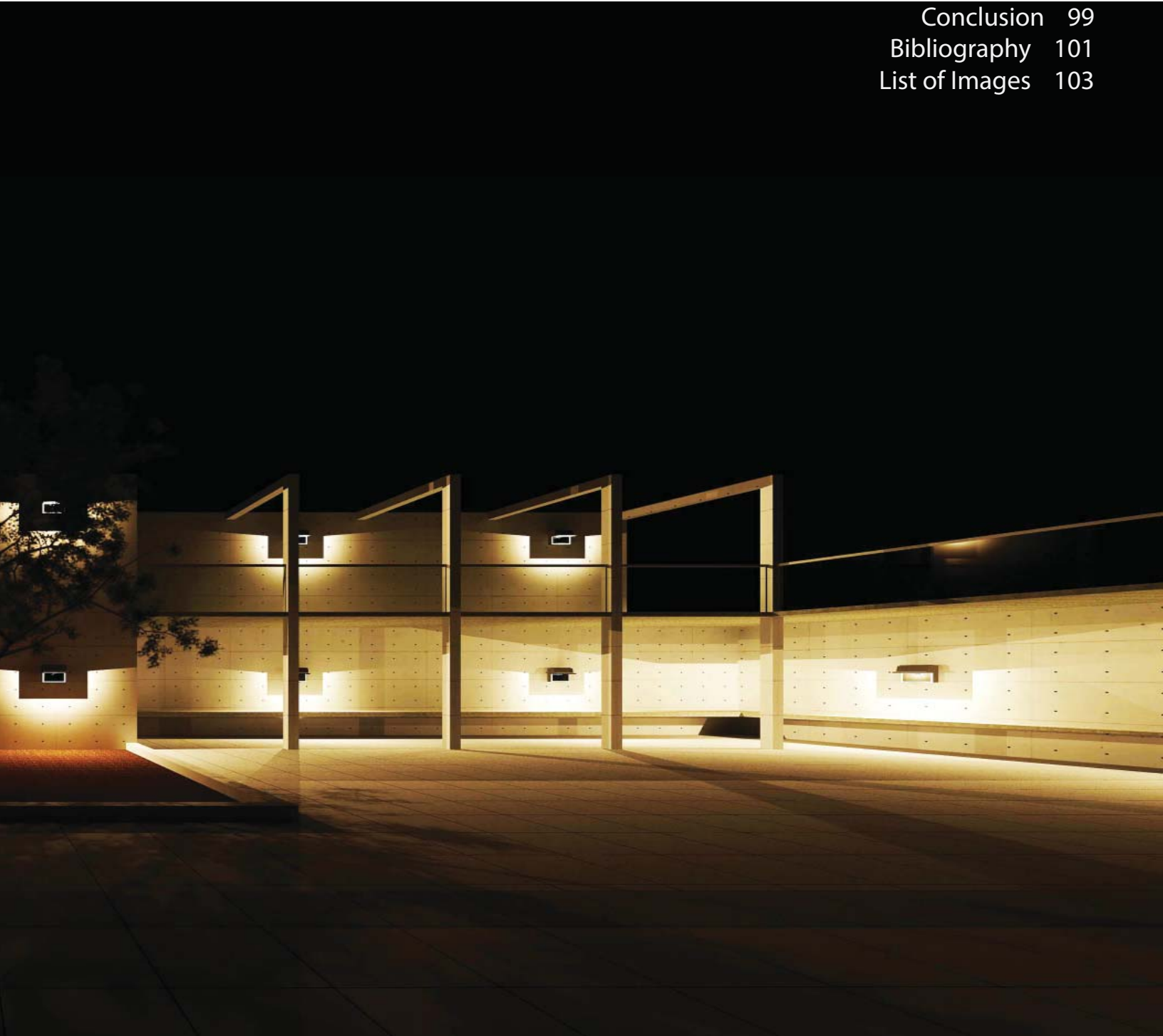
ABSTRACT

Buildings which address space through all the senses, rather than being dominated by ocular centric considerations solely, have become the minority within the discipline of Architecture. This can create an imbalance, perceivable as feelings of estrangement and detachment for the inhabitant. Estrangement is particularly evident within health care architecture, which owes much of its current form to ideas developed during Modernism. In response to this imbalance, Architecture from the past may have lessons which can be applied. This thesis investigates the potential of applying spatial techniques and approaches learned from the 16th century Japanese teahouse. A health care building which benefits from the same kind of reflective and contemplative spaces inherent in the teahouse includes counseling facilities, and therefore an outpatient cancer care center was chosen to apply these lessons. Among the techniques researched and applied, the use of a sequential vision of spatial experience, which reveals the building in stages and facilitates spaces for pause and reflection, was particularly powerful. The result is a building with spaces that take on an almost sacred tone, where one can be at peace with the realities of their current situation, and begin thinking about the path forward.



TABLE OF CONTENTS

Introduction	1
Background Research	5
Design Project	33
Conclusion	99
Bibliography	101
List of Images	103



INTRODUCTION

Imbalance in Architecture, Healthcare, the Japanese Teahouse

In The Eyes of the Skin Juhani Pallasmaa discusses the importance of creating a sensory architecture, an architecture which rather than being dominated by ocular centric considerations solely, address space through all of the human senses. In doing so, he argues that it is possible to create an experiential architecture which “fuses our image of self with our experience of the world. The essential mental task of architecture is accommodation and integration. Architecture articulates the experiences of being in the world and strengthens our sense of reality and self...significant architecture makes us experience ourselves as complete embodied and spiritual beings.”¹ And yet, Pallasmaa also points out that Architecture which speaks to more than just the eye and the qualities of the exterior is increasingly the minority today. When Architecture overwhelmingly favors the sense of vision over others it can create an imbalance, perceivable as feelings of estrangement and detachment for the inhabitant. He writes “The inhumanity of contemporary architecture and cities can be understood as the consequence of the negligence of the body and the senses, and an imbalance in our sensory system. The growing experiences of alienation, detachment and solitude in the technical world today, for instance, may be related with a certain pathology of the senses. It is thought provoking that this...is often evoked by the technologically most advanced settings, such as hospitals and airports.”²

Pallasmaa is not the only one to single out such modern buildings as being imbalanced and creating a sense of detachment. In his essay 'Architecture and Health' Edwin Heathcote writes to the increasingly detached and mechanical nature of our health care facilities, and while he focuses a little more on the sterility and homogenization present rather than the lack of a tactile architecture as Pallasmaa does, his conclusion is similar. *"The result is that as we spend more of our medically extended lives in hospitals, as our most joyful and traumatic moments, from childbirth to death, are spent in hospital rather than at home, the buildings which we find ourselves are devoid of culture, stripped of aesthetic and seemingly any architectural depth or symbolism. These buildings constitute our entrances to and our exits from the physical world, yet at the exact moments we are most in need of relief, meaning and spiritual uplift, we find ourselves surrounded by the bleak expression of hygiene and efficiency which characterizes the modern hospital-buildings planned on grids laid out to accommodate the most efficient distribution of fluorescent lighting. There is no attempt to express momentous nature of these events, no attempt to celebrate or grieve, to impose gravitas or induce joy."*³ It seems that there is some agreement amongst architects and critics that there is a problem with physical detachment and imbalance in architecture, ironically often in the very type of buildings which seek to help people. If what Pallasmaa writes is accurate and *"significant architecture makes us experience ourselves as complete embodied and spiritual beings"*⁴, then one could argue that health care buildings are the exact type of structures which demand a more thoughtful and balanced approach to design.

Architecture has not always grappled with imbalance and detachment in such an extreme manner. In many ways, this is a recent trend corresponding to the development of modern society and modern technology. Heathcote notes how historically architecture has *"occupied the ground at the centre of the relationships between the sacred, the city and the body."*⁵ He notes that the medical architecture of the ancient Greeks for example, was more holistic, and was a collection of mentally and physically healing buildings set against a dramatic landscape. He specifically mentions the temple complex of Epidauros, which included an enormous theatre, thought to have been critical to the healing process as a purging of emotion. *"The backdrop to the drama was the landscape, and the patient was always made aware of where they were, of*



ABOVE (TOP): Photo of Red Cross War Memorial Children's Hospital Cape Town, South Africa. Example of problematic health care architecture. Photo from Wikipedia

ABOVE (MIDDLE): Photo of Epidaurus Theatre, Greece. Photo from Wikipedia and licensed under the Creative Commons Attribution-Share Alike 2.0 Germany license, free to share.

ABOVE (BOTTOM): Jo-an Teahouse, built by Oda Uraku (1620) Photo by Michael Freeman and taken from *The Modern Japanese Tearoom* by Michael Freeman.

their physical situation beneath the skies, within the world, in the cosmos- a word which means both order and beauty in Greek."⁶ This 'holistic' approach to healing was not unique to the Greeks and was in fact implemented in varying degrees by a variety of cultures from antiquity up through and including the Renaissance.

One architectural tradition that Heathcote does not reference is that of the Japanese. While this may not be surprising as traditional Japanese architecture is not associated with healing spaces the way other ancient civilizations are, they are in fact responsible for at least one Architectural typology uniquely theirs; the teahouse. For those well versed in Japanese architecture, the teahouse would not seem a strange addition to this conversation of healing architecture. It is a structure whose main purpose (along with the tea ceremony itself) was to center the body and the mind, as a means of self reflection and contemplation. And while these structures are of a much smaller scale than those great complexes built by the Greeks or Egyptians, they are just as thoughtfully conceived and purposeful in their design. Their therapeutic value and use is admittedly more mental than it is strictly physical- no direct physical treatment occurred in these structures. However, today we now know that there is a strong connection between mental wellbeing and physical health.⁷ It is my hope that there are lessons that can be learned from the teahouse, and then applied to modern health care architecture in the goal of creating reflective and contemplative spaces beneficial to someone experiencing extreme life events.

This project investigates and applies teahouse architectural ideas and principles to present day health care facilities. Cancer is perhaps the most prevalent and pressing medical ailment afflicting our society today, and a Cancer Care Center was chosen as the health care building to test this theory. In the process of this investigation, it has been necessary to familiarize myself with an understanding of teahouse history and themes, as well as the burgeoning architectural typology of the cancer care center. It is my hope that by applying architectural techniques from the teahouse, we can begin to think about and design health care facilities that "*make us experience ourselves as complete embodied and spiritual beings*" and "*express (the) momentous nature of these events,to celebrate or grieve, to impose gravitas or induce joy.*"⁸

It should be noted that this investigation does not seek to present a cure for cancer. Rather, it seeks to learn lessons from a past tradition and apply those to present day in an effort to live and die from cancer in a more humane manner. And while I do believe there is a relationship between the two, it is important to note that this is not an attempt to design a space to get better, but rather a space to feel better.

NOTES

1. Pallasmaa, Juhani, The Eyes of the Skin, John Wiley and Sons Press (England), 2005, pg 11.
2. Ibid, pg 19.
3. Heathcote, Edwin, The Architecture of Hope, Essay titled 'Architecture and Health', Frances Lincoln Press, 2010, pg54.
4. Pallasmaa, Juhani, The Eyes of the Skin, John Wiley and Sons Press (England), 2005, pg 11.
5. Heathcote, Edwin, The Architecture of Hope, Essay titled 'Architecture and Health', Frances Lincoln Press, 2010, pg54.
6. Ibid, pg 54.
7. Weil, Andrew, Spontaneous Healing, Ballantine Books (New York), 1995.
8. Heathcote, Edwin, The Architecture of Hope, Essay titled 'Architecture and Health', Frances Lincoln Press, 2010, pg54.



BACKGROUND RESEARCH

The Japanese Teahouse

(i) History

(ii) Themes and Application

Maggie's Cancer Care Center

(i) History

(ii) Precedents





THE JAPANESE TEAHOUSE

History, Themes, and Application as Precedent

"The chashitsu, or tearoom, is a fairly common feature of Japanese wooden house architecture....As the locus for the tea ceremony, it provides an atmosphere that is at once tranquil, yet at the same time maintains a certain spiritual and psychological tension...Though miniscule in size, it looms large in significance and is worthy of our serious consideration."¹ Terunobu Fujimori

"Because they are static and enclosed, teahouse spaces make it possible for people in them to exist in limitless mental spaces. Enclosed in small spaces, people can allow their thoughts to range to infinity. When they do so, at the extreme limit of contemplation, they can hear the voices of nature and travel to cosmic distances."² Tadao Ando

The Japanese tearoom or teahouse is a subject which has been extensively researched and theorized by historians and architects alike. Like most heavily researched subjects, differing opinions are numerous in regard to its most essential ideals and its 'truest design'. It is an architectural form which even today continues to be experimented with and expanded upon. Its history however, is somewhat less contentious as historical documents (and in some cases the buildings themselves) still exist to help document its birth and gradual development.

PREVIOUS: Tadao Ando's Honpukuji Temple, Awaji Island Japan. Photo by author

LEFT: Tadao Ando's Yumebutai Teahouse, Awaji Island Japan. Photo by author



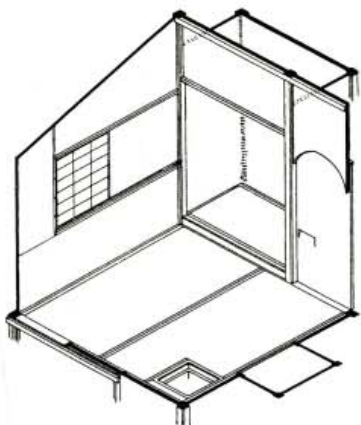
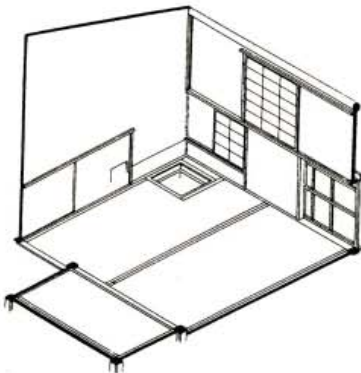
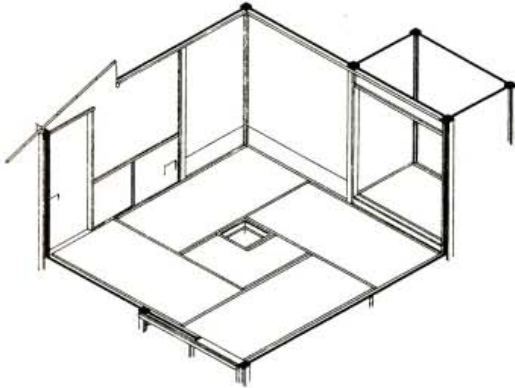
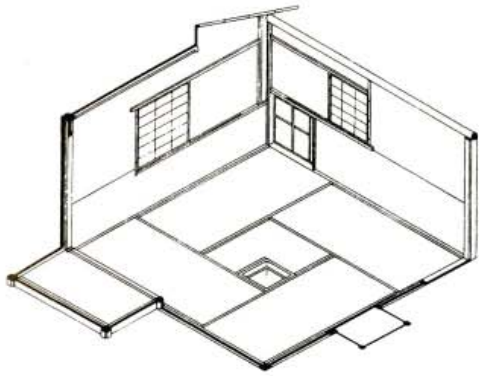
ABOVE: "Landscape in the style of Yan Wengui" painting by Chinese artist Dai Jin (1388-1462). Notice the rustic huts nestled into the side of the mountain, as this becomes the ideal location for a Japanese teahouse. Image from wikipedia and considered public domain. OPPOSITE TOP: Jo-an tearoom, Inuyama, Japan. (1618) Built by Oda Uraksuai, disciple of Sen no Rikyu. Photo by Akihisa Masuda and taken from *The Contemporary Teahouse* by Terunobu Fujimori. OPPOSITE BOTTOM: Katsura Rikyu, Kyoto Japan (1589) Photo by author.

HISTORY

Tea cultivated in China was first introduced to Japan around 600AD, although it wasn't until the Zen priest Eisai (1141-1215) returned from studying in China and successfully cultivated tea at his Kyoto temple that Japan's tea drinking and tea culture began as we know it today. From its inception into Japanese society, tea was thought to have medicinal and restorative qualities, probably due to its caffeine content which people at the time did not have exposure. Initially established in Zen temples and used by monks, it was in the Muromachi period (1333-1568) that it grew in popularity as it was taken up by the ruling samurai class. During this period its use was quite different from what we now associate with tea culture. It was largely consumed at social occasions or banquets for various occasions, and was part of a form of entertainment combining bathing and tea drinking. This was not the intimate reflective ritualistic tea drinking that we now connect with tea culture, but rather a social and boisterous activity often mixed with consumption of alcohol. While the similarities between this period of tea use and that which came later are few, it did move tea from a strictly religious beverage consumed by monks to one that had a wider audience within Japanese society.

It was with the advent of the *iori*, or hermitage, that tea culture (and the tea house) was transformed into a tradition more closely resembling that which we know today. *"The beginnings of denchu no cha (solitary tea) came....when little huts began to appear on urban outskirts. These huts were generally situated in a secluded spot at the foot of a mountain in view of the city, as if blown there by the wind. Inside was a hearth, some art on dilapidated walls, a vase of flowers, a small desk by the window- in short, a reading and writing retreat from the bustling world."*³ The *iori* marks the beginning of the teahouse as an austere retreat from city life, and was void of the previous extravagance and social component in tea drinking. And while a tea hut outside the city was ideal, as this was not always possible, gradually spots for these huts were found on spacious mansion grounds, *"a mountain hut in the city"*⁴ It was also at this time that the foundational teahouse floor size was developed, the 4.5 tatami mat scale (roughly 9' by 9')





With the *iori*, the ideal site (rustic, removed from the city) and the ideal room size (4.5 tatami mat) were determined. However the building's architecture was still far from refined. Over time, this developed in correlation with austere Zen aesthetics that were increasingly trickling down into society. Two terms came to define these developments, *hie* (chill) and *yaseru* (sparse, thin). And while the floor size continued to be 4.5 tatami mats, the organization of interior architectural elements became formalized. Tea was now made in the same room as it was consumed, and not brought in by a servant as had once been the practice. The floor arrangement took the pattern of a half tatami mat in the center with four single mats spiraling around it. This central half mat contained the *ro*, or sunken hearth, and was the center around which the tea ceremony took place. Along with the center *ro*, another fundamental element developed was the *tokonoma* - an alcove off the spiraling mats which contained a work of art or carefully chosen flower arrangement. When looking across the room from the *tokonoma*, one had a view of a garden outside. The wall material changed from a *washi* paper covering to a wattle and daub plaster called *tsuchikabe*. Window (*shitaji-mado*) height and location was carefully chosen in an effort to give desired light and shadow effects. This may have given rise to one of the earliest architectural models, the *okoshiezu*, a three dimensional paper model used to spatially understand the effect of light entering the teahouse and the placement design elements. (Nishi) This structure eventually came to be known as a *soan*, or rustic hut.

This period of architectural development coincided with philosophical and artistic advances which gave the teahouse a whole new meaning. All of the architectural elements combined to give the appearance and feeling of austerity, of a refined simplicity void of superfluous elements. This was now a desired appearance, much the way that modernism sought to remove ornament and decoration from building design. (Isozaki) The careful selection of art or nature for the *tokonoma*, and the arrangement of the adjacent garden the tea room peered out onto gave inhabitants an opportunity for reflection and contemplation. The sparse and subtle interior elements, along with the scripted tea ceremony provided a means for personal reflection, shifting the focus inside to one's own thoughts.

This is without doubt largely linked to the Zen practice of meditation and the *koan*- a Zen image, story, or riddle contemplated in effort to gain a higher level of insight. While inside this space, one could sit and observe the art or flowers in the alcove, look out onto a garden, or silently observe their host fixing tea. The subsequent inner thoughts or reflection could be a transcendent experience. And yet truly experiencing the moment and experience was encouraged, clearing the mind of unnecessary distractions, and completely focusing on the present experience. Japanese has an expression for this, "*ichigo, ichie*", one moment, one meeting.

Sen no Rikyu (1522-1591) is widely acknowledged as the most important figure in the history and development of the Japanese teahouse. While employed by the leader Oba Nobunaga, he further developed and refined the tea ceremony and the tea house, and helped popularize this with the ruling elite. His modest aesthetic was expressed in the rustic art and tea utensils he collected to be used in his ceremonies. He experimented with compressing the tea room even further, altering the number and configuration of tatami mats, and added the *nijiri-guchi*; a small entrance host and guest had to crawl through to enter the tea room. While he was not the first to utilize this entrance, he was the first to use one for a person of higher rank. The social implication of forcing a leader through such an entrance (necessitating the removal of the sword) was profound.

Centuries after Sen no Rikyu, modern Japanese architects continue to investigate and experiment with teahouse design. Such notable architects as Kiyonori Kikutake, Arata Isozaki, Kisho Kurokawa, Yoshio Taniguchi, Hiroshi Hara, Tadao Ando, Terunobu Fujimori, and Kengo Kuma have all created modern day iterations of this traditional architectural form. Fujimori writes, "*amid the frantic pace of twenty-first-century life we need more than ever spaces where we can escape and pause for a drink of tea, quietly still the mind and wipe away anxiety, a space where we can enjoy the soothing company of a few close friends.*"⁵

OPPOSITE TOP: Reconstruction of Fushin-an, 4.5 mat tea room built by Sen no Rikyu. Illustration by Masao Nakamura and taken from *The Contemporary Teahouse* by Terunobu Fujimori.

OPPOSITE BOTTOM: Reconstruction of Juraku residence, 2 mat tea room built by Sen no Rikyu. Illustration by Sutemi Horiguchi and taken from *The Contemporary Teahouse* by Terunobu Fujimori.

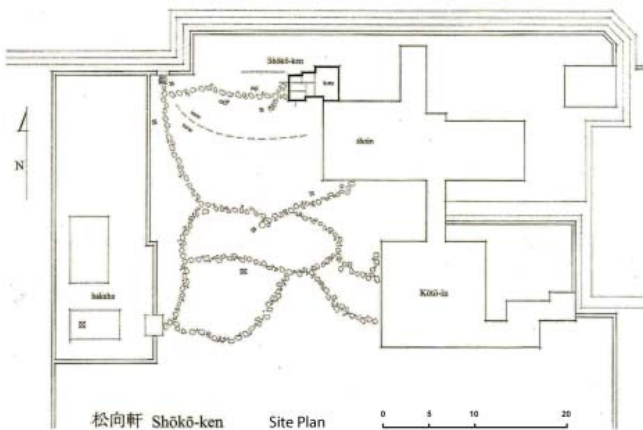
THEMES AND APPLICATION

While the history, lineage, and architectural development of teahouses is important to the understanding of this unique building type, it is the mental and psychological effect that these spaces have on their inhabitants that are most relevant to health care architecture. The teahouse's ability to calm, and stimulate contemplation and reflection is what is most valued when discussing it as a precedent for new ways of thinking in this area. If these elements or themes can be identified and understood, then they could also potentially be applied to a seemingly disparate architectural typology. It may be possible to instill this spirit in a building from a different cultural and societal context. In addition, it might also be possible to recognize successful design gestures that occur throughout the history of Architecture, identifying the architectural elements or thought process in a design which "make us experience ourselves as complete embodied and spiritual beings."⁶

Relationship to the city

A tea house's relationship to its site is a defining characteristic of the typology. Described as a "mountain hut in the city", ideally it was located on the periphery of an urban area. However, as this was not always possible, teahouses began to develop inside large urban spaces on land set aside for nature. They were in the city, and yet not of the city, as the architectural features and rustic nature gave the impression of solitude even when the congestion and noise of urban life surrounded them. Often these buildings were placed overlooking a distinctive natural feature such as a mountain or view of the sea. In some ways, one could compare them to a modern day forest cabin or lake house for a city dwelling resident.

The teahouse's removal from the city is something that could have relevance to architecture today. A building's site is not always a constraint that the designer has control over, but when it is, locating a building



ABOVE: Plan of the Shoko-Ken tea house Kyoto Japan. Illustration by Robin Walker, taken from *A Late Medieval Daimyo Sukiya Style Teahouse* by Robin Walker. Notice the carefully planned meandering path that one walks during their procession towards the teahouse.

OPPOSITE TOP: Photo of entrance to Gallery-no-ie garden Nara, Japan. (2004) Photo by Michael Freeman, taken from *The Modern Japanese Tea Room* by Michael Freeman

OPPOSITE MIDDLE: Photo of entrance to Ryogo-tei garden Osaka, Japan. (1995) Photo by Michael Freeman, taken from *The Modern Japanese Tea Room* by Michael Freeman

OPPOSITE BELOW: Photo of entrance procession for Fushimi Inari Taisha, Kyoto Japan. Photo by author.

close enough to an urban area to take advantage of infrastructure and amenities, but far enough to provide a break can be a desirable quality. This break can have a substantial psychological effect as one feels like they are entering a different, almost sacred, plot of land. Siting a building next to or near a natural feature is also advantageous, as it will at the very least provide beautiful views, and could also allow the inhabitant a higher awareness of nature (wind, sun, time) as well as possible moments for physical interaction. These can all translate well into health care architecture, which needs to have the available infrastructure of an urban environment, but also a psychological and physical break from the city.

Procession to the Teahouse

While the teahouse's break from the city begins with its location, this physical and psychological break is further emphasized by the use of a meandering procession to the building. This garden path, or *roji*, signified the first stage of meditation, the passage into self-illumination. *"The roji was intended to break connection with the outside world, and to produce a fresh sensation conducive to the full enjoyment of aesthetics in the tea room itself.One may be in the midst of a city, and yet feel as if he were in the forest far away from the dust and din of civilization."*⁷ These processions could create a wide variety of emotion and feeling for those passing through, including that of serenity and purity. In fact, the nature of the sensations to be aroused in passing through the *roji* differed with different tea masters. Famous tea master Sen no Rikyu aimed at creating utter loneliness, while others aimed to create an attitude of *"a newly awakened soul still lingering amid shadowy dreams of the past, yet bathing in the sweet unconsciousness of a mellow spiritual light, and yearning for the freedom that lay in the expanse beyond."*⁸

The architect's use of a deliberate and controlled entrance is a technique that is frequently employed today. This interstitial space, however, is generally not utilized as a means to affect a psychological change on the inhabitant. Today this procession space is usually utilized as a means to provide a safety and noise buffer, as well as framing views of the building.





*ABOVE: Rokko Chapel in Kobe, Japan. Design by Tadao Ando (1986)
Photo by author. Here Ando uses a tunnel to amplify the procession
to the chapel or sacred space.*

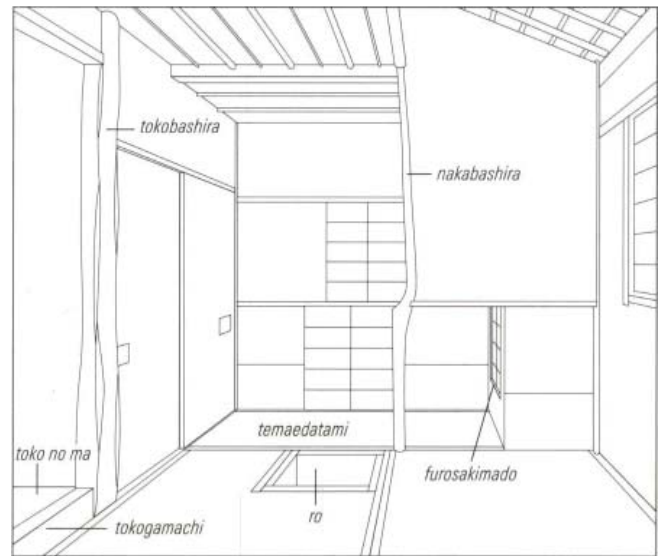
*OPPOSITE TOP: Drawing of basic tearoom components and their
appropriate scale. Drawing by Terunobu Fujimori, taken from The
Contemporary Teahouse by Terunobu Fujimori.*

*OPPOSITE MIDDLE: Axonometric drawing of Taian teahouse. Draw-
ing by Kazuo Nishi, taken from What is Japanese Architecture? by
Kazuo Nishi.*

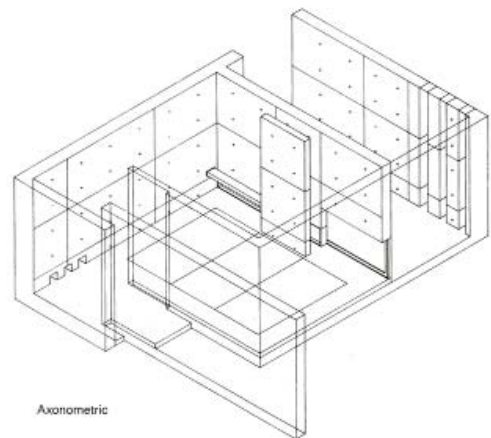
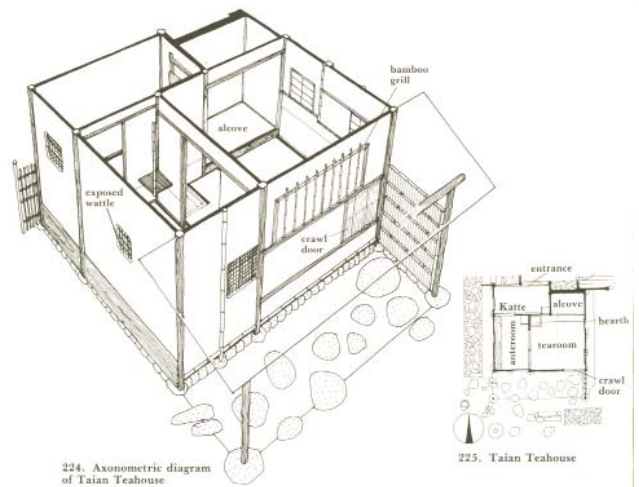
*OPPOSITE BELOW: Axonometric drawing of Tea House for Soseikan-
Yamaguchi House Extension, Hyogo, Japan 1982. Design by Tad-
ao Ando, drawing by Tadao Ando, taken from The Contemporary
Teahouse by Terunobu Fujimori.*

While these are important considerations, another use of the procession which could be employed in tandem is the instillation of a psychological state of mind or an emotion in the inhabitant. When employing this in relation to health care architecture where the ultimate goal is either to feel better or to get better, this procession could be designed to have a calming effect where contemplation or reflection is encouraged.

Human Scale and Proportion



Pallasmaa writes, "understanding architectural scale implies the unconscious measuring of the object or the building with one's body, and of projecting ones body scheme into the space in question. We feel pleasure and protection when the body discovers its resonance in space".⁹ Perhaps this is no where more true than in the traditional teahouse. As previously mentioned, the scale and design of the tearoom is particularly intimate, the standard being roughly 9' by 9'. The entrance is a small 2.3 ft x 2.3 ft opening, forcing the inhabitant to crawl through. While the scale was small and the space confined, it is not necessarily uncomfortable. This is because things are scaled proportionally to the size of the human body. From the width of the tatami mats to the height of the alcove (eye level for someone sitting down) every interior component of the teahouse is deliberately designed in relation to the human body. And by making the space small, it was an effective means of enabling people to focus their mind on their body. Walls right in front of your eyes, ceilings so low that you hit your head. The ceiling over the tokonoma and the server are flat, but the ceiling over the guest is inclined to help mitigate the feeling of constriction in the small place. Tadao Ando writes, "Interiors of tea house architecture are smaller and lower than spaces in western style houses. Dimensions depend on the placement of the human body. Because they are static and enclosed, tea houses make it possible for people in them to exist in limitless mental spaces. Enclosed in small spaces, people can allow their thoughts to range to infinity. When they do so, at the extreme limit of contemplation, they can hear the voices of nature and travel to cosmic distances."¹⁰





Designing on a human scale is perhaps most common today in residential architecture. Larger buildings, particularly those that serve great numbers of people, tend to avoid design on the human scale. Hospitals and health care architecture are not an exception to this trend. While there are times that the functional requirements of these buildings necessitate a larger scale (space for machinery, etc) there are also opportunities to make spaces in which people can feel better that more accurately fits the human body. People feel more comfortable in these spaces, and they can have a positive psychological effect.

Incorporation of nature and natural elements



In contrast to other architectural traditions which focus on controlling and subordinating nature, the Japanese tradition is one of intimacy, blending the 'house-garden' relationship into one to allow for a *"harmonious coexistence of human beings and their natural surroundings"*.¹¹ This is particularly apparent with tea house design. The traditional teahouse was placed in a carefully designed garden landscape, often providing views from choice locations of scenic vistas as one progressed towards the structure. This carefully planned nature path often incorporated what is known as borrowed scenery, or shakkei (借景), in which designers made the natural panorama an extension of the garden. Once inside the teahouse, this theme of nature was continued as views onto the garden are visible from the tea room itself. This is particularly apparent at Katsura Rikyu (桂離宮), whose gardens and multiple teahouses were designed by the tea master and garden planner Kobuir Enshu (1579-1647). These teahouses at Katsura, which have been analyzed extensively by such architects as Bruno Taut and Arata Isozaki, are *"places for meditation in an idealized natural setting"*¹² and exemplify the skillful ability of seamlessly pairing architecture with nature. Kengo Kuma, who has designed a variety of contemporary teahouses, writes, *"the teahouse is an attempt to bring nature into space. Nature and the body resonate with each other, noises and agitation are eliminated from the body, and the body is reset and refreshed."*¹³



The incorporation and intermingling of nature with architectural design is surely not a topic unknown to modern designers. Multiple projects exist in which this has been done successfully.

And yet, health care buildings, which seek to help people in one way or another, often seem to overlook this benefit. Possibilities exist in the potential of incorporating natural views out onto nature (as was done at Katsura) and in bringing nature inside structures. The teahouse tradition has shown that rather than being something disparate from architecture, nature can be designed and used in such a way as to be complimentary or even part of the architecture. As Kuma notes, *"nature and the body resonate with each other"*, and this can cause the *"body to be reset and refreshed"*. It would seem natural that buildings which seek to help people feel better would make use of this tradition.

Inward and outward looking architecture

While the incorporation of nature into architectural design elements is a theme which can be identified in traditional teahouses, placing nature without any manipulation in front of the viewer does not achieve the desired effects. The design of such structures required a careful balance between allowing in natural elements, while at the same time restricting their incorporation and contact. Kuma writes, *"the teahouse requires direct contact with the environment on the one hand, while remaining the visitor from the same environment on the other. The visitor can hear and smell the surrounding garden, and even catch a glimpse of it."*¹⁴ This delicate balance was achieved through carefully chosen outward looking views (architecture that looks outward) as well as periodically allowing natural element inside the structure in controlled ways that initiates contemplation (architecture that looks inward).

Light was one means through which nature could be brought inside and hence contemplated upon. For the most part, light was severely restricted in the traditional teahouse to facilitate a mind unfettered by external stimuli. However, window placement was at times allowed, *"calculated not only for ventilation and visual effect of the walls, but also to create just the right play of light and shade when the tea ceremony is performed. Some windows can be propped open at various angles to vary the quality of seasonal light that falls on the interior."*¹⁵



OPPOSITE (TOP): Katsura Rikyu, Kyoto Japan. Photo by author
OPPOSITE (MIDDLE): Katsura Rikyu, Kyoto Japan. Photo by author
OPPOSITE (BOTTOM): Genji Monogatori Museum, Uji Japan. Photo by author
ABOVE: Ryoanji, Kyoto Japan. Photo by author



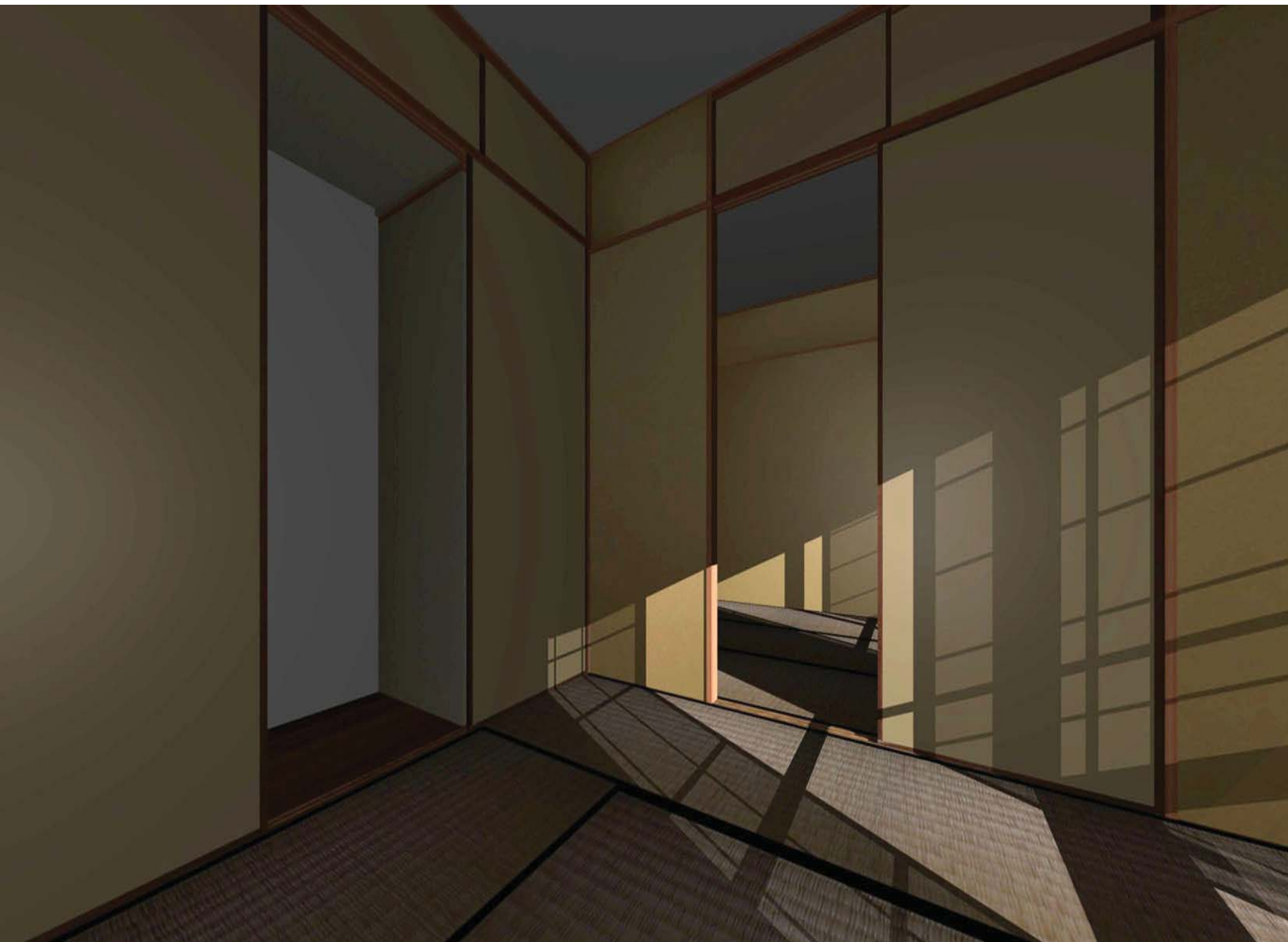
And when natural elements such as light were severely restricted except for choice moments/areas, the orchestrated places of acceptance or rejection of nature took on an almost transcendent air. Junichiro Tanizaki writes, *"and so it has come to be that beauty of a Japanese room depends on a variation of shadows, heavy shadows against light shadows- it has nothing else.... The light from the garden steals in but dimly through paper-paneled doors, and it is precisely this indirect light that makes for us the charm of a room.... We delight in the mere sight of the delicate glow of fading rays clinging to the surface of a dusky wall, there to live out what little life remains of them."*¹⁶ Careful restriction of natural light was only one way that nature was used as design technique and contemplation device. Restricted views of nature is another technique. *"A story relates that at the end of his life, Sen no Rikkyu built his last teahouse somewhere on the mountains overlooking the Inland Sea. When it was completed, he invited his most noble friends for a direct taste of his mature design talents. They made the long laborious ascent, passed through a carefully designed garden, but were disappointed. The view to the sea was blocked everywhere by the old fool. Before crouching into the teahouse they were made to step down and rinse their hands and mouth. Bending down, just at the surface of the water they were treated - through a tiny opening in the hedge - to a full view of the grand scenery of the Inland Sea."*¹⁷

While this careful control of nature is something not intuitive in Western Architecture, there are some architects who have applied it appropriately. Ando writes, *"impart rich meaning into spaces through such things as natural elements and the many aspects of daily life. Such things as light and wind only have meaning when they are introduced inside a house in a form cut off from the outside world. The forms I have created have altered and acquired meaning through elements of nature (light and air) which give indications of the passing time and the changing of seasons, and through connections with human life."*¹⁸ When Ando speaks of *"impart(ing) rich meanings into spaces"*, perhaps this is not dissimilar from what Palasmaa describes as *"experienc(ing) ourselves as complete embodied and spiritual beings."*

ABOVE: Yumebutai Conference Building Awaji Island, Japan. Building by Tadao Ando; photo by author.
OPPOSITE: Microstation render of Sanwa Mansion Apartment interior, render by author.

Refined Choice of Material

The traditional teahouse was constructed from natural materials such as bamboo, straw, wood, and paper.





While the material choice was rustic and plain, these materials were treated with delicate care. In *The Book of Tea*, Okakura writes, “the tearoom is unimpressive in appearance. It is smaller than the smallest of Japanese houses, while the materials used in its construction are intended to give the suggestion of refined poverty. Yet we must remember that all this is the result of profound artistic forethought, and that the details have been worked out with care perhaps even greater than that expended on the building of the richest palaces and temples. A good tearoom is more costly than an ordinary mansion, for the selection of its materials, as well as its workmanship, requires immense care and precision.”¹⁹ Indeed, much like the Japanese principle of *wabi-sabi*, the beauty of these materials did not come from a flashy expensive looking appearance, but rather from the meticulous treatment of simple materials. Kisho Kurokawa notes, “(the teahouse), was more exacting in its array of natural materials, precise proportions, and finishing details. Even crooked natural timbers were carefully selected to consciously achieve just the right degree of artless appearance.”²⁰ Carefully selected materials and elements were left in their naturally imperfect, or impoverished state, and became highly appreciated as they aged. The process of transition, withering away and even decay informed the human senses. In this way, the materials true nature and composition was apparent, and yet not so overpowering as to dominate ones thought. The material could be appreciated if studied and contemplated closely, but was not the main focus and was able to fade away as the backdrop to other elements. Tadao Ando expresses this idea nicely when he writes about his own work, “two features are characteristic of my work: a use of limited materials, which have their textures exposed, and an ambiguous articulation of the function of space. I believe that these attributes enable me to produce effective spatial prototypes. The strong nuances of simple materials and their textures emphasize simple spatial compositions, and thus provoke an awareness of a dialogue with natural elements such as light and wind. In all of my works, light is decisive in forming space.”²¹

ABOVE: Photos of traditional and contemporary tearoom materials . Photos by Michael Freeman, taken from *The Modern Japanese tearoom* by Michael Freeman.

The use of plain, rustic materials in health care architecture runs counter to the current trend today. Originating around the turn of century where health care facilities began to be designed increasingly as medical machines, material choice and composition has become homogenized creating a feeling of sterility and mental detachment. Heathcote writes, “Since the dis-

covery of infection, hygiene has been placed at the centre of hospital and healthcare design. The white-tiled walls and terrazzo floors, the big windows and white enameled bedsteads, the big, airy rooms, these motifs which grew out of necessity in an age of Victorian splendor became the template for a functionalist modernist aesthetic, an architectural reductivism."²² Yet as noted previously, while necessary at times due to the function of the spaces, this has also had a somewhat negative effect on the human psyche, as it has contributed what Pallasmaa notes as a " *growing experiences of alienation, detachment and solitude*" in the inhabitants. If lessons can be learned from the teahouse and applied to current health care architecture, perhaps a change in material choice and composition is a way to inject a little humanity into an increasingly inhumane architectural typology.

NOTES

1. Fujimori, Terunobu, The Contemporary Tea House, Kodansha International Press (Tokyo), 2007, pg 7.
2. Tadao Ando, 'From Self Enclosed Modern Architecture Towards Universality' in *The Japan Architect* 301 May 1982
3. Fujimori, Terunobu, The Contemporary Tea House, Kodansha International Press (Tokyo), 2007, pg 9.
4. *Ibid*, pg 10.
5. *Ibid*, pg 25.
6. Pallasmaa, Juhani, The Eyes of the Skin, John Wiley and Sons Press (England), 2005, pg 11.
7. Okakura, Kakuzo, *The Book of Tea*, Dover Publications (New York), 1964, pg 34.
8. *Ibid*, pg 35.
9. Pallasmaa, Juhani, The Eyes of the Skin, John Wiley and Sons Press (England), 2005, pg 67.
10. Tadao Ando, 'From Self Enclosed Modern Architecture Towards Universality' in *The Japan Architect* 301 May 1982
11. Crouch, Dora and Johnson, June, Traditions in Architecture, Oxford University Press, 2001, pg 227.
12. *Ibid*, pg 229.
13. Kuma, Kengo. Breathing Architecture: The Tea House of the Museum of Applied Arts. Birkhauser Architecture Press, 2008.
14. *Ibid*.
15. Nishi, Kazuo. What is Japanese Architecture? Kodansha Press (Tokyo) 1985.
16. Tanizaki, Junichiro. In Praise of Shadows. Leete's Island Books Press (Stony Creek, CT) 1977, pg 18.
17. Nitschke, Gunter. *From Shinto to Ando: Studies in Architectural Anthropology in Japan*. Academy Editions Press (London) 1993, pg.44.
18. Tadao Ando, 'From Self Enclosed Modern Architecture Towards Universality' in *The Japan Architect* 301 May 1982
19. Okakura, Kakuzo, *The Book of Tea*, Dover Publications (New York), 1964, pg 32.
20. Walker, Robin. A Late Medieval Daimo Sukiya Style Japanese Teahouse. Routledge Press, 2002, pg 84.
21. Ando, Tadao 'A wedge in Circumstances' in *The Japan Architect*, 243, June 1977
22. Jencks, Charles and Heathcote, Edwin. *The Architecture of Hope: Maggie's Cancer Caring Centers*. Frances Lincoln Limited Publishers (London), 2010 pg 70.



MAGGIE'S CANCER CARE CENTERS

History and Precedents

"During the modern era, though, the hospital became more machine than monument, a stripped down, functional series of boxes accommodating the increasingly complex technical apparatus for prolonging life. The result is that as we spend more of our medically extended lives in hospitals, as our most joyful and traumatic moments, from childbirth to death, are spent in hospital rather than home, the buildings in which we find ourselves are devoid of culture, stripped of aesthetic and seemingly any architectural depth or symbolism.."¹ Edwin Heathcote

"The Maggie's Centers represent an attempt to reintroduce architecture into the medical process and to signpost the restoration of representation. They stand apart from hospitals, and are not required to accommodate the fearsome battery of machinery to which clinical structures are hostage. Nor do they need to house the range of services and functions around which their neighbors revolve. They are free to concentrate on the individual and the social. This puts them, it is true, in a privileged position, able to be freer, more expressive."² Edwin Heathcote

While the teahouse is an architectural typology that instills a sense of contemplation, unfortunately modern buildings which incorporate the same kind of reflective spaces today are the minority. However, in the UK, a relatively new architectural typology is evolving. It is the cancer care facility, an outpatient health care center aimed at providing non-treatment services for those living with cancer. It is a hybrid between residential, office, and health care architecture, a space in which the goal is not necessarily to get better, but to feel better. It is my hope that such buildings can provide a testing ground for some of the lessons learned from the teahouse.

*LEFT: Aberdeen Maggie's Center designed by Snohetta (2013).
Image from Dezeen Architecture website, published 12/22/2011.
Image provided by Snohetta Architects.*

HISTORY AND PURPOSE

In *The Architecture of Hope*, Charles Jencks and Edwin Heathcote describe in detail how health care architecture evolved to its current state, and various problems within this model. *“Throughout history, the hospitals physical structure have changed in function, appearance, prominence and location within or outside the walls, but the hospitals and their predecessors remained pivotal architectural elements of the city. Their scale, grandeur, decoration or sheer presence became a cipher for the mercy and charity of the metropolis, the outward sign of inner goodness.....During the modern era, though the hospital became more machine than monument, a stripped down functional series of boxes accommodating the increasingly complex technical apparatus for prolonging life.....We spend more of our medically extended lives in hospitals, as our most joyful and traumatic moments, from childbirth to death are spent in the hospital rather than at home. These buildings are devoid of culture, stripped of aesthetic and architectural depth or symbolism.”*³

Thus it is with this pretense that Maggie and Charles Jencks began to visualize a different kind of health care space. Their story and experience with cancer is a personal one, like so many others around the world. In 1988 while teaching at the AA in London, Maggie Jencks (a landscape architect) and Charles Jencks (an architect) received the unfortunate news that Maggie had been diagnosed with cancer. Their architectural background and first hand experience in seeking help put them in a unique position to see inadequacies within the present system, and provided a means to think about a new kind of space. As related by Maggie herself in *A View from the Front line*, *“...waiting in itself is not so bad – it’s the circumstances in which you have to wait that count. Overhead (sometimes even neon) lighting, interior spaces with no views out and miserable seating against walls all contribute to extreme physical enervation. Patients who arrive relatively hopeful soon start to wilt.”*⁴ Unfortunately Maggie did not survive, finally succumbing to the illness in 1995. But from their experience, the Jencks were able to formulate ideas for a new architectural hybrid, one in which the primary goal is not necessarily to get better but to feel better.

What evolved were buildings which offer care that is fully supportive of conventional medical treatment, *“our focus is the ‘psychosocial’ element of cancer care.*

We work to create an environment and provide a program of support that helps people deal with the effects of cancer that cannot be treated with drugs or medical intervention; emotional issues, psychological trauma, practical issues such as money worries and nutrition.”⁵ The facilities purpose centers around the idea that those with cancer want to be people, not patients. And “the architecture sends a very clear message to the vulnerable that they matter, that their illness is important to us and society. It gives recognition....that illness, struggle, and death are integral to living well, and nothing to hide.”⁶ In creating a place where self transformation was the goal, a new kind of building took shape. One that is a hybrid of sorts, with mixed functions and moods, “a cross between several existing types.”⁷ Not a museum, church, hospital, or home but aspects of each. This mixture “creates a sense that everyone is in it together, patients and fund raisers, carers and those who drop in for tea, staff and doctors. This informal continuity, the mixture, overcomes the sense of isolation that usually divides a business into the centre and the periphery.”⁸

Not surprisingly, this non-type hybrid model has become popular with architects, interested in an emerging building type that has aspects of many typologies. Over the past decade or so, Maggie’s Centers have been designed by such prominent architects as Zaha Hadid, Frank Gehry, Page and Park, Richard Rogers, Kisho Kurokawa, OMA, Daniel Libeskind, Steven Holl, Snohetta among others.

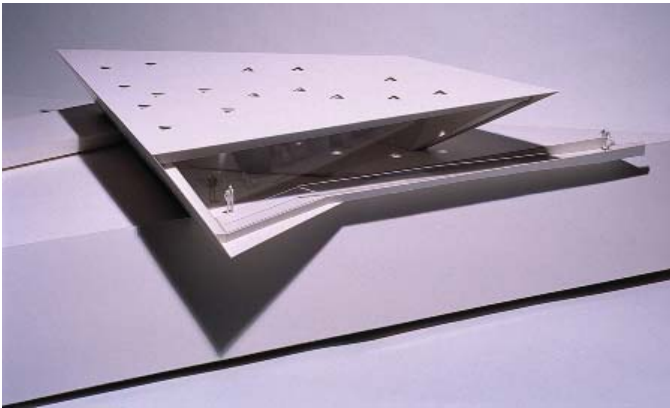
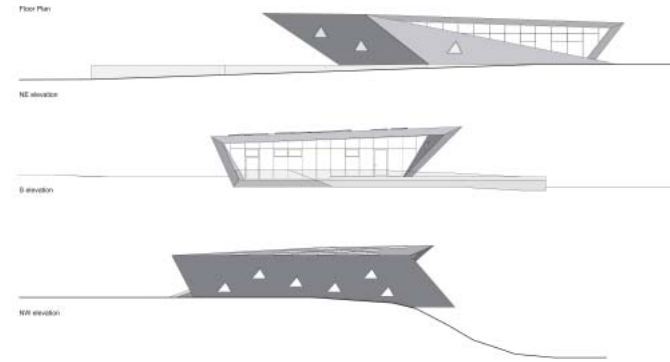
SOURCES

1. Heathcote, Edwin. Essay titled ‘Architecture and Health’ from Architecture of Hope, Frances Lincoln Limited Publishers (London) 2010 pg 54.
2. Ibid, pg 54.
3. Ibid, pg 54.
4. Ibid, pg 12.
5. Ibid, pg 46.
6. Ibid, pg 41.
7. Ibid, pg 13.
8. Ibid, pg 14.
9. Ibid, pg 132.
10. Ibid, pg 180
11. Ibid, pg 182.

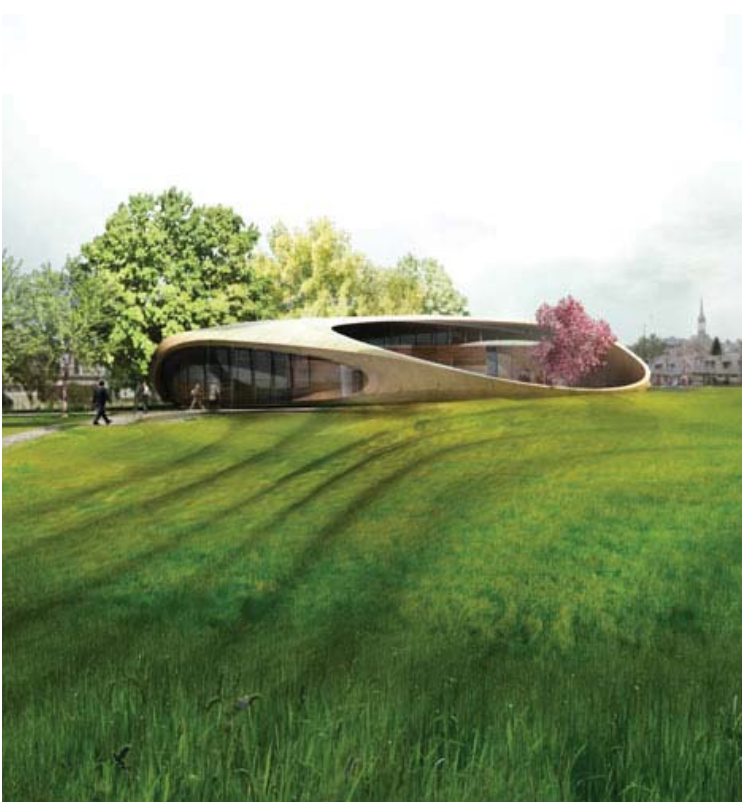
PRECEDENTS

Designed by Zaha Hadid, Maggie's Center in Fife, UK opened in 2006. The center features Hadid's characteristic angular geometry with its structure peeling away from the edge of a slope and cantilevering over a slight hill. Though small in scale, the building treats visitors to a break from the chaos of the surrounding environment as Hadid states *"once you step into the building, you enter a completely different world"*. Inside the building, Hadid uses a sweeping roof to define varying spaces, *"a kind of heirarchy of intimacy and height within a small shell."* While unorthodox in form, Hadid acknowledges the role that architecture can have on those struggling with physical and mental ailments, *"spatial experiences can elevate the spirits, it's about how space can make you feel good."*⁹

LEFT: Elevations and working model of Fife Maggie's Center, taken from *Architecture of Hope* by Edwin Heathcote, drawings provided by Zaha Hadid.
BELOW & OPPOSITE: Photos of Fife Maggie's Center, taken from *Architecture of Hope* by Edwin Heathcote, photos provided by Zaha Hadid.





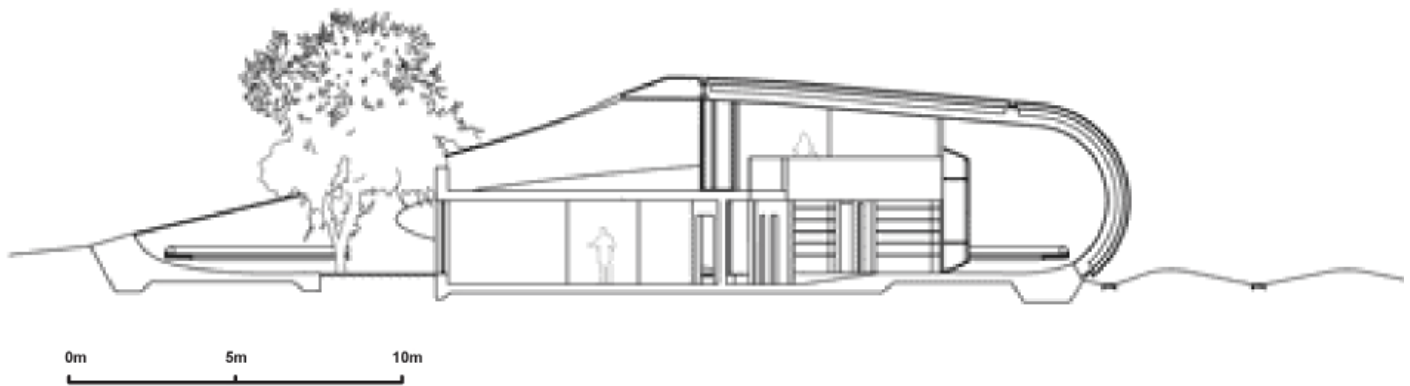
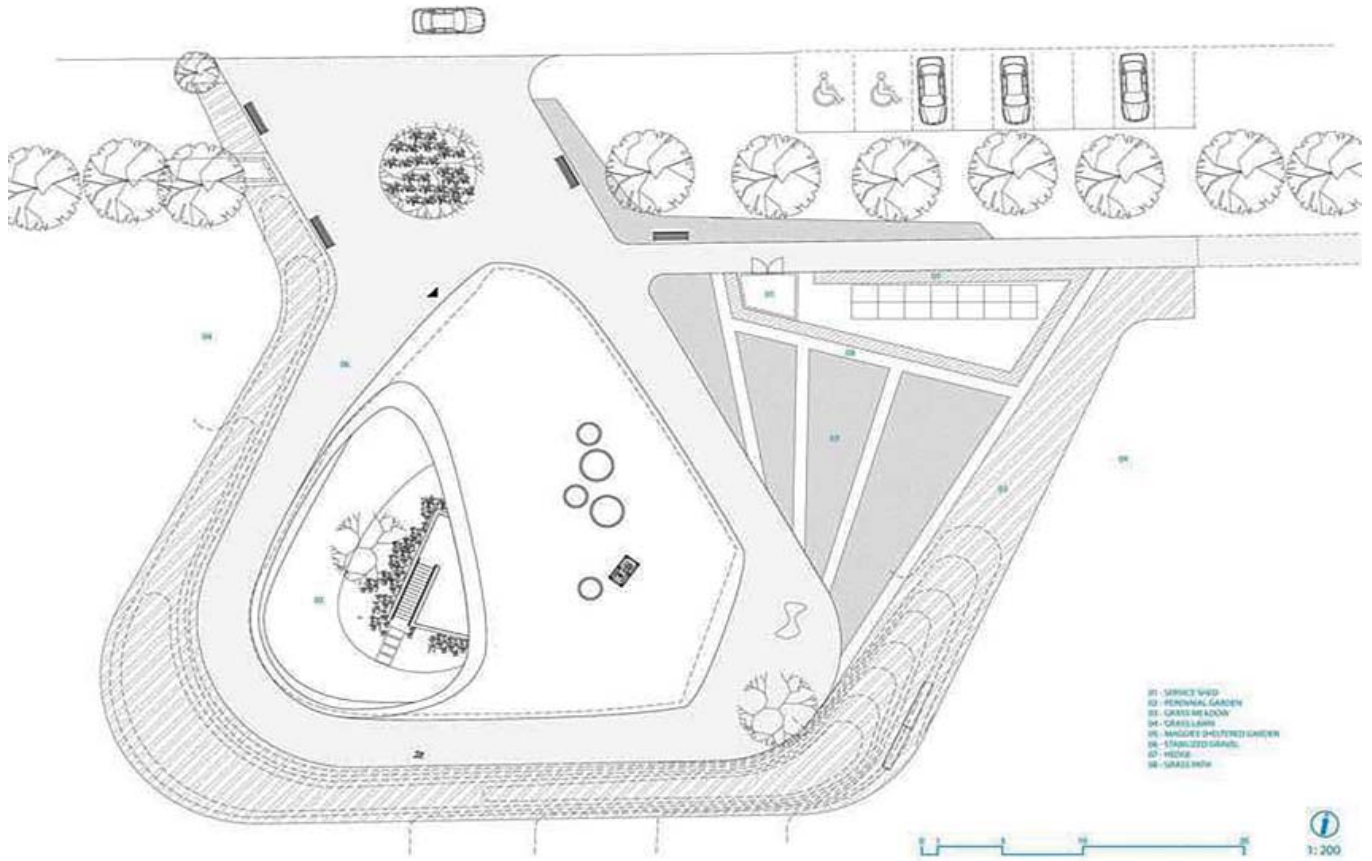


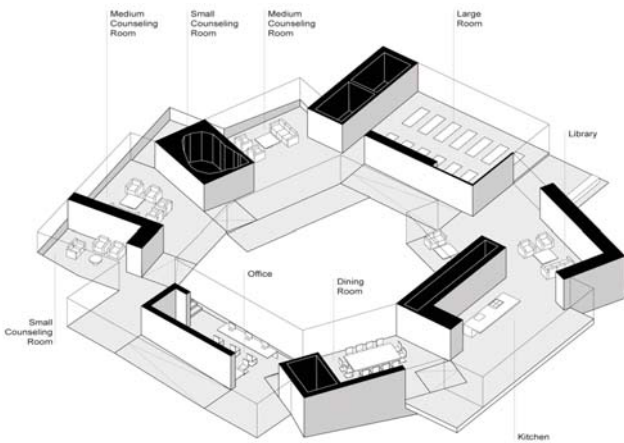
Completed in 2013 by Snohetta, this Maggie's Center in Aberdeen, Scotland features a curvilinear pavilion with two voids. The main void operates as a courtyard and skylight, creating a connection between inside and outside and includes the planting of a large cherry tree. Indeed, this design benefits from the lush Scottish environment, with green grass, and an existing tree line. While the building is clad in a hard concrete, the interior is arm and welcoming, mostly made up of soft timber material.

LEFT AND BELOW : Renders of Aberdeen Maggie's Center, Aberdeen UK. Published Dezeen Architecture website 12/22/2011. Renders provided by Snohetta Architects.

OPPOSITE: Site plan and sections of Aberdeen Maggie's Center, Aberdeen UK. Published Dezeen Architecture website 12/22/2011. Drawings provided by Snohetta Architects.







Designed by OMA and located in Gartnavel, UK, this Maggie's Center contains "spaces spun around a courtyard, scrambled to make the best use of views, aspect, and the movement and progression through the building."¹⁰ Like Hadid's center in Fife, Koolhaas creates a variation of public/communal spaces as well as intimate counseling spaces, but here he does so with the subtle change in ceiling heights, allowing the plan to rise and fall following the sites topography. This creates an arraignment of rooms embodying a memory of cloistered courtyards or the medieval hospital. Koolhaas states that the Maggie's Centers are "neither hospital, nor home, nor office, but something in between. The idea behind the center is to setup something in opposition to the hospital to provide something that the hospital can't give- comfort as opposed to sterility and hygiene- flowing space not corridors, a connection to the outside, and natural light."¹¹



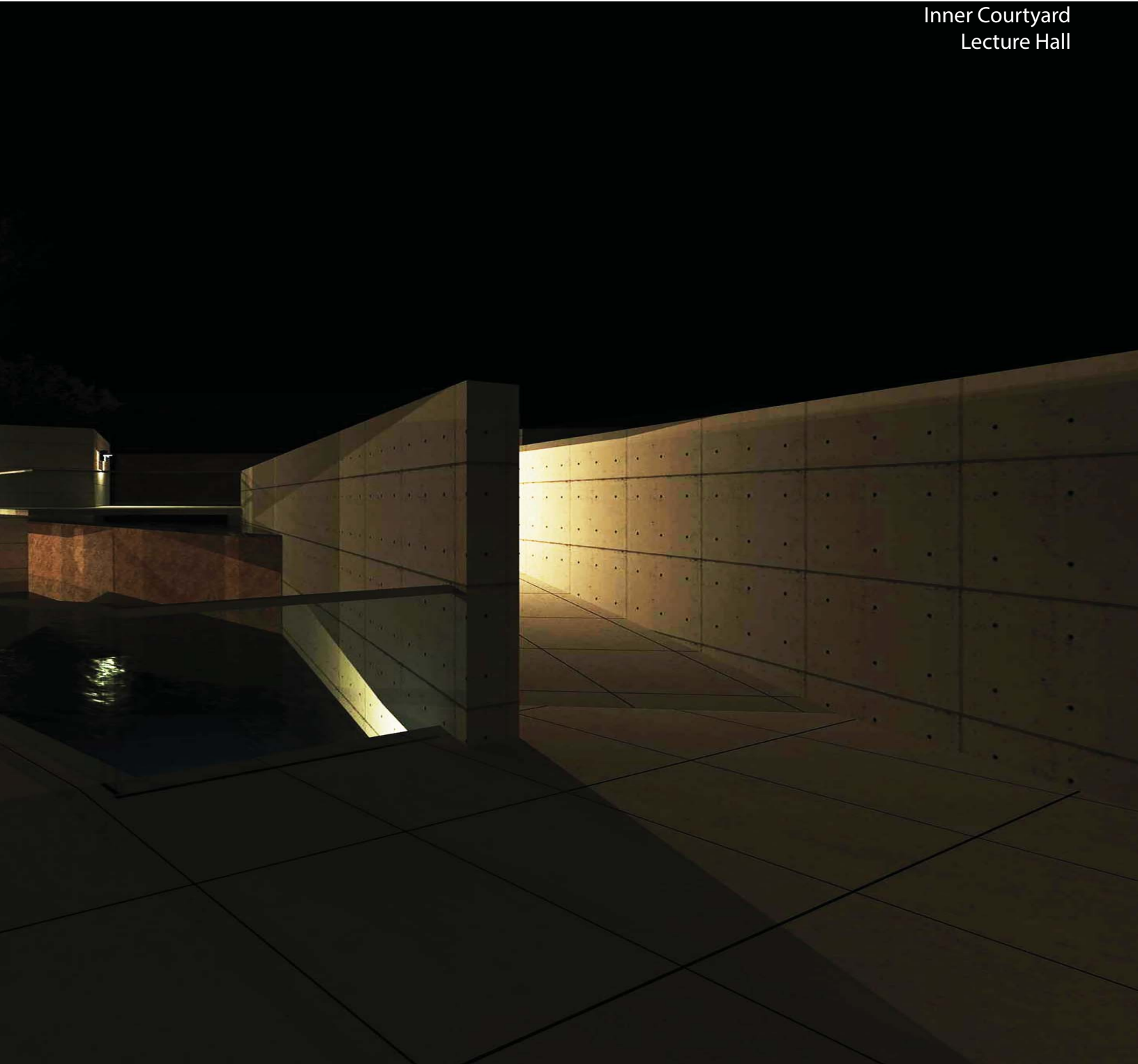


OPPOSITE ABOVE : Axon and elevation of Gartnavel Maggie's Center, taken from *Architecture of Hope* by Edwin Heathcote, drawings provided by OMA.
OPPOSITE BELOW: Photo of Gartnavel Maggie's Center, Gartnavel UK. Photograph from Dezeen Architecture website, published 10/5/2013. Photograph by Philippe Ruault.
ABOVE: Photos of Gartnavel Maggie's Center, Gartnavel UK. Photos from Dezeen Architecture website, published 10/5/2013. Photograph by Philippe Ruault.



DESIGN PROJECT

Site
Building Configuration
Entrance
Inner Courtyard
Lecture Hall



BUILDING SITE

Waterfront, Old Town Alexandria VA

“Architecture is not simply the manipulation of forms. I believe it is also the construction of space and, above all, the construction of a ‘place’ that serves as the foundation of space. My aim is to struggle first with the site and thereby get a vision of the architecture as a distant place. The inside and outside of architecture are not separate things but instead form one continuous place. Architecture ought to be seen as a closed, articulated domain that nevertheless maintains a distinct relationship with its surroundings.”¹ Tadao Ando.

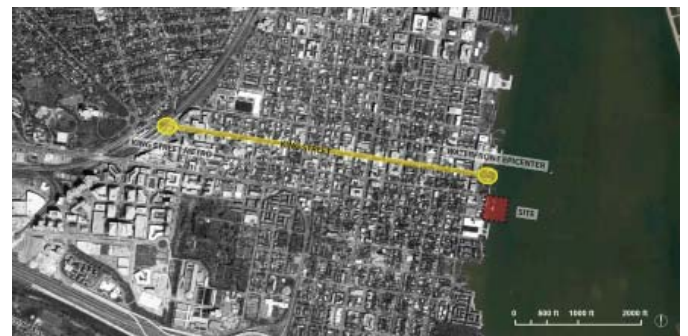
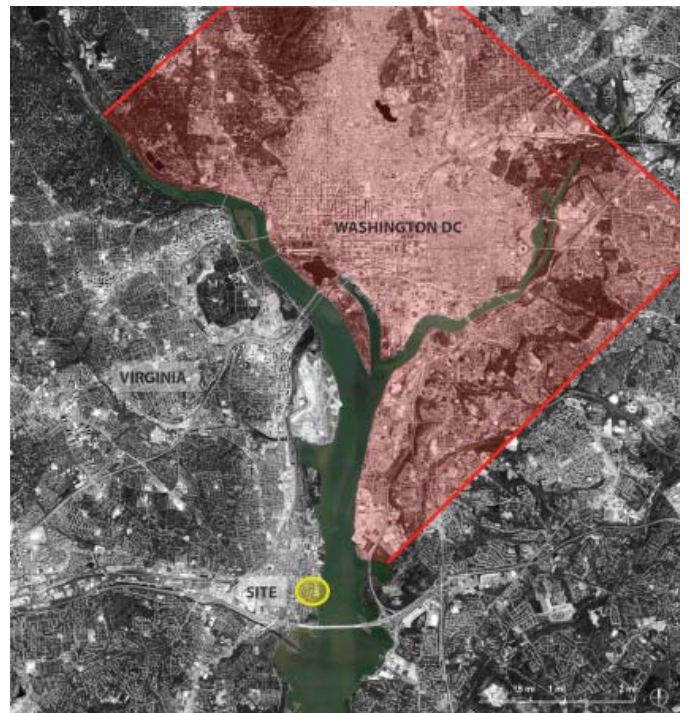
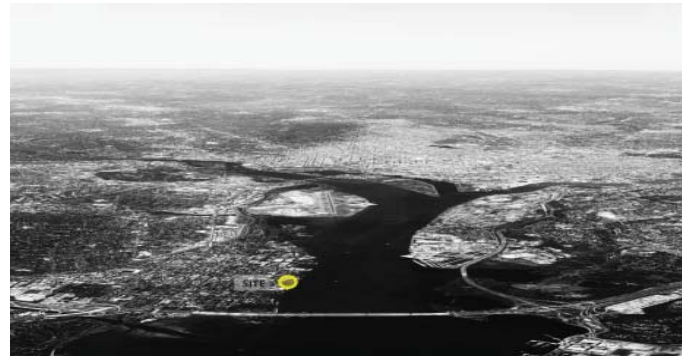
For many practicing architects, constructing a building on what they deem as their ideal site is not a reality. More common than not, architects are told which parcel of land their building is to be placed, generally decided by a combination of economic factors, zoning restrictions, and public sentiment. In these cases, the site (or a small option of sites) are suggested to the architect, and it is their responsibility to make sure that their design is an appropriate fit for the land provided. This initial constraint can help drive the design, and in a slightly counter intuitive way, make the architect’s job a little easier.

However, given the speculative and theoretical nature of this investigation, I felt compelled to choose my own site based on criteria self imposed. This criteria was influenced by and a result of research involving the traditional Japanese teahouse and the Maggie's Cancer Care Center precedents primarily located in the UK. It was my goal to find a plot of land that provided the necessary components that allowed me fully realize my goal of a cancer care counseling center that provided rest and contemplation for those going through such a difficult experience. In this section, I will describe in detail the criteria influencing my choice of site, and what this meant in relation to my building.

The traditional teahouse was ideally sited on the periphery of an urban area. Placed on a piece of land set aside for nature, but close to urban life, this allowed for a "mountain hut in the city" and created a break that facilitated the psychological transformation and respite which was so important to the function and experience of the teahouse. Similarly, I sought an environment which was on one hand part of the city, allowing for all the infrastructure benefits that the urban environment provides, but was also slightly detached and separated from the chaos inherent in the city. I found a site that met this criteria in Old Town Alexandria, VA.

Old Town Alexandria is a revitalized historic city on the edge of the Potomac River. While it is not an urban context in the way that New York or even Washington DC is, it is a more dense area when compared to other parts of suburban Northern Virginia roughly five miles from Washington. It's main thorough fair is King Street, which cuts a direct line from the area's metro station and public transportation hub to the waterfront. Understandably, this street has been extensively developed as it is a major tourist attraction. Old Town Alexandria is also where the Virginia Tech Architecture School satellite campus is located, so it wasn't hard to become familiar with the area.

I choose to site my cancer care center on a corner plot located at the intersection of Duke Street and Strand Street. While Duke Street is only a couple streets south of King Street, it's ambiance is very different. King Street tends to be congested with pedestrians shopping and dining as it's retail and restaurants are clearly the center of Old Town. Comparatively, my chosen site is an easy walk from King Street, but far enough

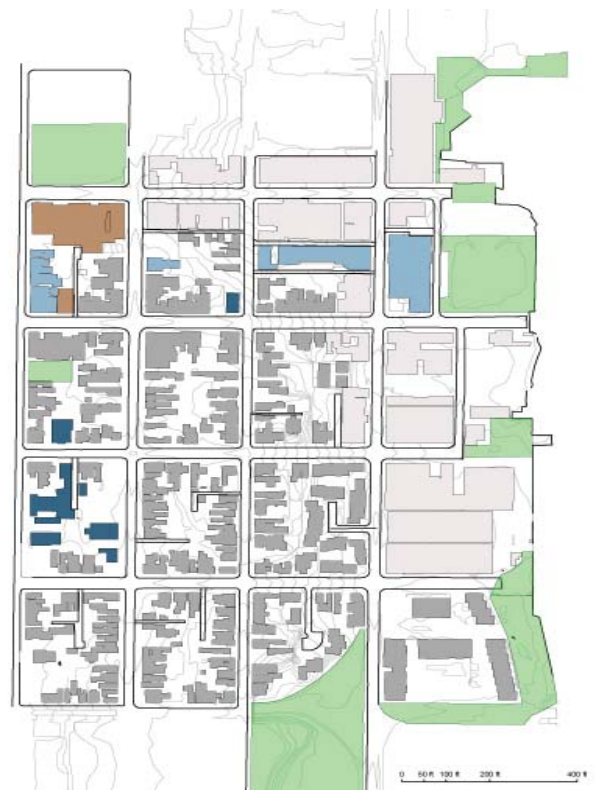
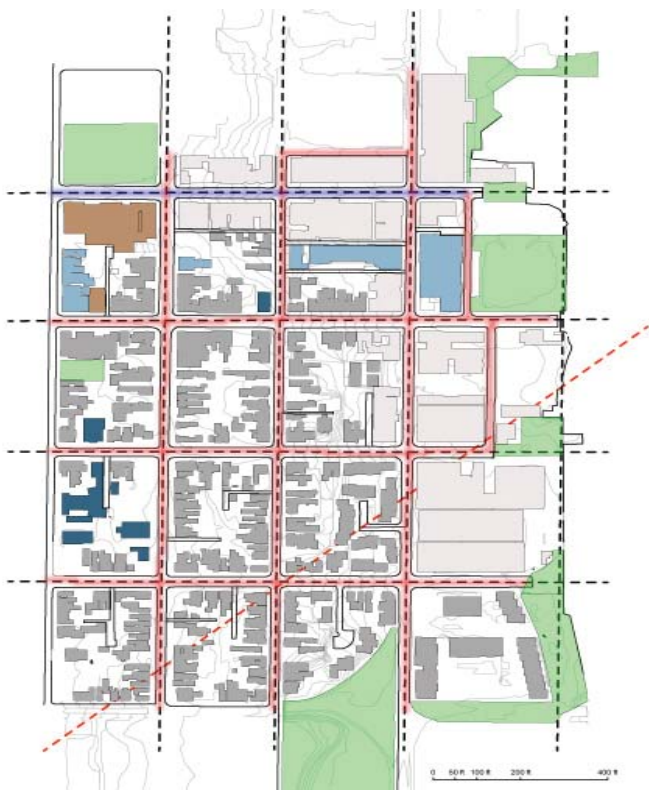
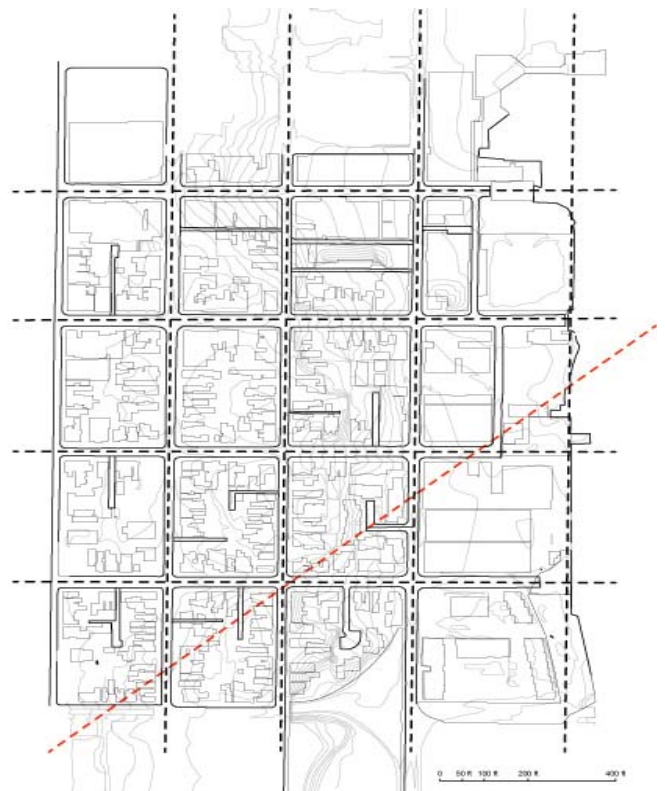


TOP: Aerial view showing project site in relation to Washington DC
MIDDLE: Plan view showing project site in relation to Washington DC
BOTTOM: Close plan view showing project site's location in Old Town Alexandria
PREVIOUS PAGE: Revit render, Entrance procession and water element

of people and cars. The adjacent neighborhoods are largely composed of residential housing. This site is also on the water allowing for beautiful views and interaction with the river. Currently it is an under-utilized parcel of land with a tiny public park, a couple of run down mercantile shops, and a massive parking lot. It is close enough to King Street to be “of the city”, yet detached enough to feel like it is not in the city. The small public park already present is inviting to pedestrians, and already provides a place for a casual stroll or stop to look out on the water. Indeed, pedestrian access was a consideration which drove site selection. I found a site that not only could be accessed on foot, but encouraged it. Initial designs utilized half the waterfront property between Prince Street and Duke Street, but the final design took advantage of the entire block allowing for two corner access points; Prince Street and Strand Street and Duke Street and Strand Street.

Another advantage of utilizing the full block was the ability to design a longer procession. I have noted previously how the traditional teahouse incorporated a carefully planned procession that helped facilitate a psychological break from the city. By enlarging the site footprint and using more land, space for a longer, drawn out procession was provided. Similarly to the teahouse, my procession seeks to achieve a psychological effect on the inhabitant, and further emphasize the break from the city. Incorporation of a column and shadow rhythm as one walks towards the center, as well as a water element, create a feeling of contemplation and reflection.

Orientation to the cardinal directions was also a considered factor. For the most part, my site (and accompanying building) is designed in relation to Strand Street and the river, which runs roughly North-South. The procession, as well as much of the building, is oriented so that it sits between these two parallel lines. However, the Center’s most powerful space and the culmination of movement through the building is the Lecture Hall, which sits out on the water and is angled facing Northeast. This is not a coincidence, the choice to break from the previously held Cartesian grid was carefully considered for various purposes. In Old Town Alexandria, Northeast is the direction in which the Summer solstice rises each June 21st. Therefore, this portion of the building receives maximum light and illumination on this day. In addition to being the day of maximum light each year, the rising summer solstice



TOP LEFT: Analysis drawing of Old Town Alexandria, major and minor roads

TOP RIGHT: Analysis drawing of Old Town Alexandria, cardinal direction orientation and summer solstice

BOTTOM LEFT: Analysis drawing of Old Town Alexandria, pedestrian access

BOTTOM RIGHT: Analysis drawing of Old Town Alexandria, zones and building types



has been revered throughout history. Many ancient structures are oriented towards this event, including the Great Pyramids as well as Stonehenge. In astrological terms, the Solstice also happens to be when the stars move from Gemini to Cancer.

Choosing a site on the water's edge was a purposeful decision. Traditional teahouses were often sited near nature that provided physical interaction and fixed views or vistas. By choosing a plot of land on the Potomac, I also sought to take advantage of these attributes, creating fixed views out onto the water, as well as physical interaction with the water as the tides ebbed and flowed. Early iterations of the building focused on the specific framed views out onto the water that were visible to the inhabitants. In addition to views, deliberate parts of the building were designed with the rising tide in mind.

The pedestrian waterfront pathway was also a consideration that made this site ideal. While it is a great place for a leisurely stroll, it hasn't been developed fully and is disconnected from the other pedestrian walkways centered around King Street and areas North. My selection of site and building design sought to develop this pedestrian walkway.

NOTES

1. Tadao Ando, 'Spatial Composition and Nature' in *El Croquis*, 44, 1990.



OPPOSITE: Photos taken in Old Town Alexandria VA. Photos show the commercial corridor of King Street with tourist shops and restaurants (top two photos), as well as civic buildings and public plazas (middle two photos). However, just a few streets in either direction off King Street, the atmosphere abruptly changes as illustrated by the bottom photo of Duke Street. Photos by author.

ABOVE: Old Town waterfront near Potomac View park, residential touching up against the river. Photo by author.



Site Photo 1 (SP1)



Site Photo 2 (SP2)



Site Photo 3 (SP3)



Site Photo 4 (SP4)

ABOVE (LARGE): Site Analysis Diagram
 ABOVE AND OPPOSITE (SMALL): Site photos corresponding to the view locations noted in the Site Analysis Diagram (SPX). Photos by author.



Site Photo 5 (SP5)



Site Photo 6 (SP6)



Site Photo 7 (SP7)

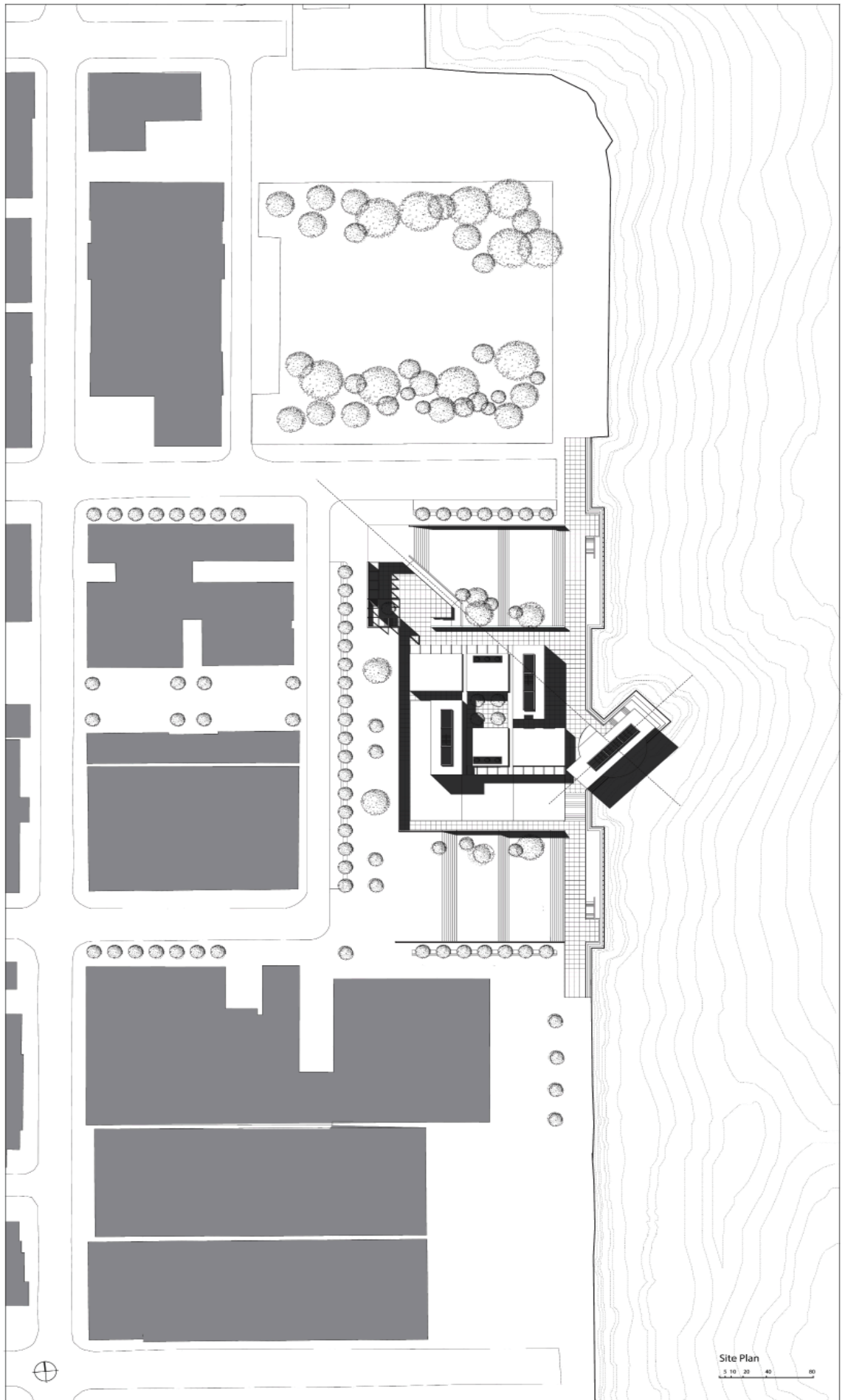


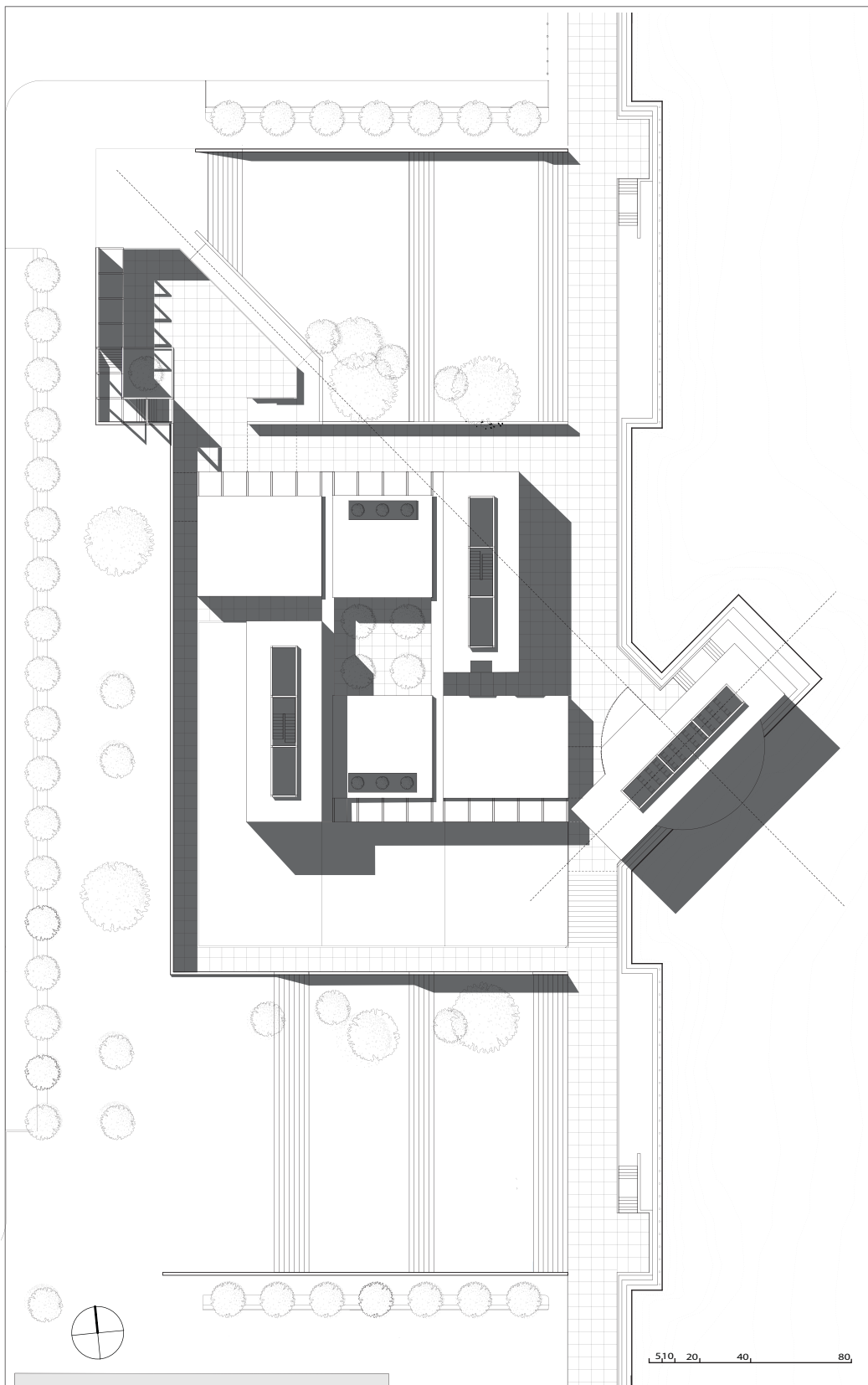
Site Photo 8 (SP8)



Site Photo 9 (SP9)







*OPPOSITE: Site drawing showing location and design of
Cancer Care Center.
ABOVE: Site drawing showing location and design of
Cancer Care Center. (Close)*

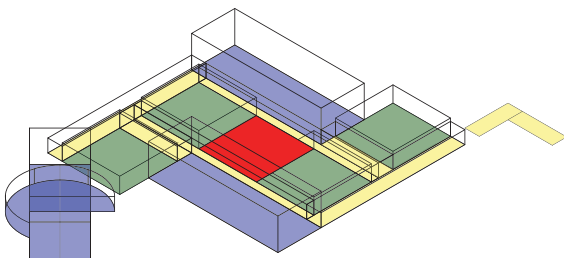
BUILDING ORGANIZATION

Nestled into its site on the edge of the Potomac and parallel with the existing roadway, the building is organized on a nine square Cartesian grid. The rhythm of this grid begins with the entrance procession, the experience of walking beneath a series of poured in place 'L' shaped columns that create the transition between public west facing Strand St. and the private center space. The initial column rhythm becomes a defining feature of the project, carried through the building expressed in the structural grid and particularly visible in the circulation corridors serving the Center.

RIGHT: Revit render, South facing circulation corridor, expressed column rhythm



As a counseling center, the building needed to contain spaces with varying degrees of privacy. This included private and semi private counseling spaces, semi private office spaces, public media center, lounge, and lecture spaces, and service/circulation areas. To accommodate these needs, a nine square Cartesian grid was applied, using the center square as a courtyard space which serves as an 'outdoor room' enclosed on four sides but open to the sky. Similar in thought to the Chinese 'courtyard house', this square could serve as the center with which the semi private and public spaces could then spiral around. (Figure A) This scheme shares similarities with the Japanese tatami mat arraignment used for teahouses. Here the central square is where the host boils water for the tea, and the surrounding rectangles are where the guests sit and receive the tea ceremony. (Figure B) Compared to the nine square grid, in the tatami plan some of the surrounding squares have become rectangles to accommodate the size and placement of human bodies. Similarly, in figure C and D which illustrates a combination of these two schemes, the rectangles surrounding the central square (outdoor room) begin to take shape and are stretched to accommodate their purpose as public spaces, while the square which do not stretch take on the purpose of semi private spaces. These public spaces would become the media center and lounge, while the semi-private spaces would become counseling spaces. To move people through the building, circulation corridors were added (Figure E). The primary corridors (10' wide) run along the East-West along the North and South sides of the building, while the secondary corridors (5' wide) run North-South through the center of building. These secondary corridors run up against the central courtyard space providing views in as one walks through. The regimented Cartesian grid is broken with the addition of the final public space. (Figure G and H). This lecture hall can be seen as the culmination of progression through the building. All previous spaces are oriented in relation to the parallel lines created by the waterfront and Strand St, while the lecture hall is angled facing the Northeast. NE is the direction of the rising sun for the summer solstice, the longest day of the year, and there has is a tradition of orienting spiritual and healing buildings in this direction. Figure H illustrates the final alteration to the lecture hall, the addition of a circular component. This contrasts the special space with the previous spaces, as well as providing panoramic views of the river.



ABOVE: Axonometric diagram showing programmatic breakdown of spaces

RIGHT: Diagram sequence describing the evolution of the plan from nine squares to final design

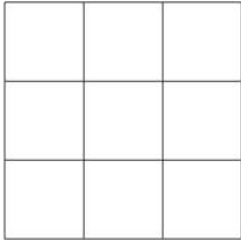


Figure A

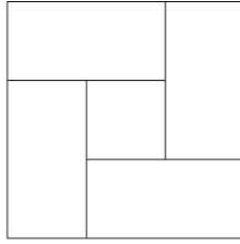


Figure B

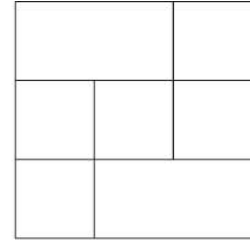


Figure C

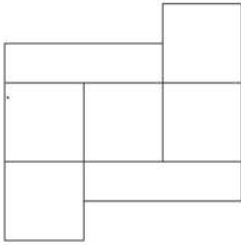


Figure D

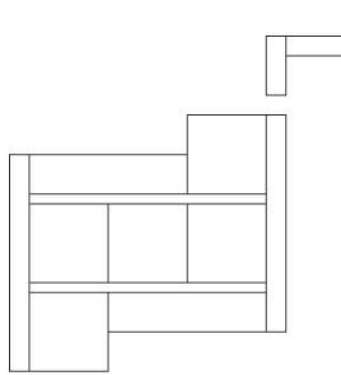


Figure E

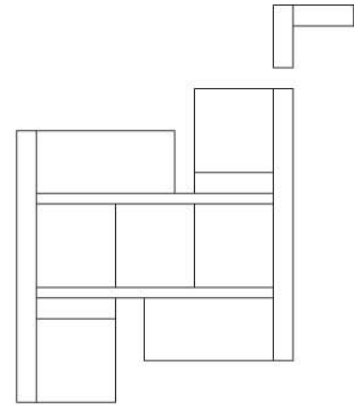


Figure F

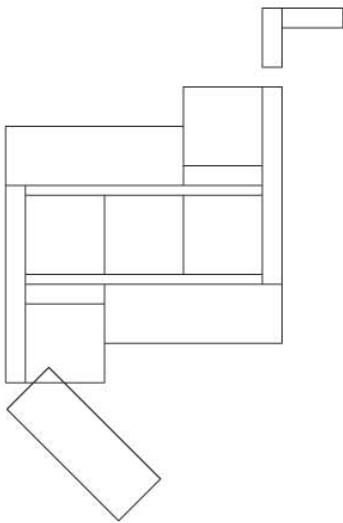


Figure G

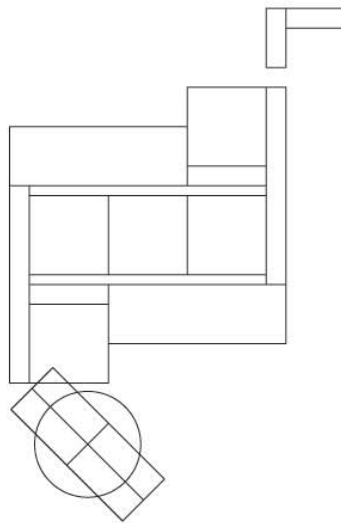


Figure H

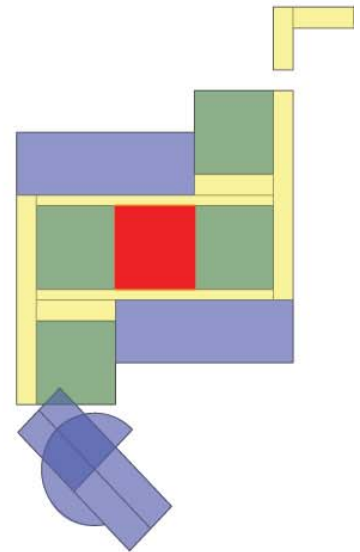



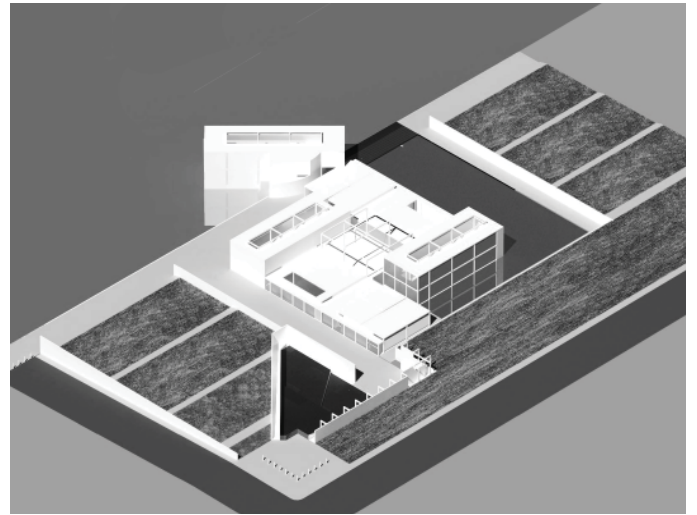
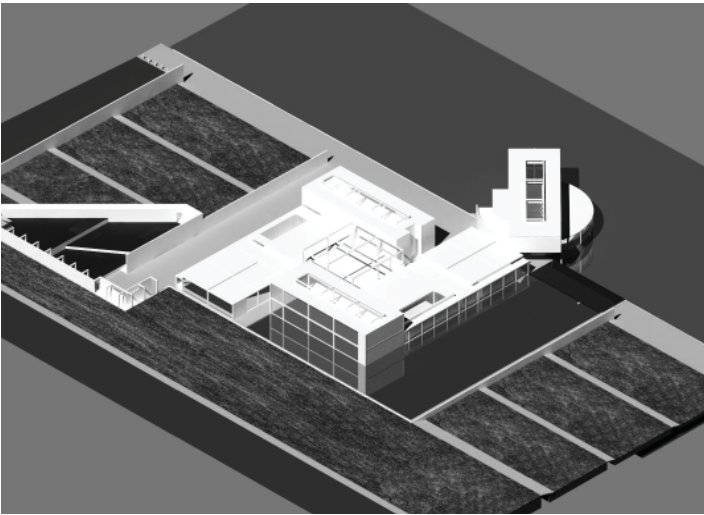
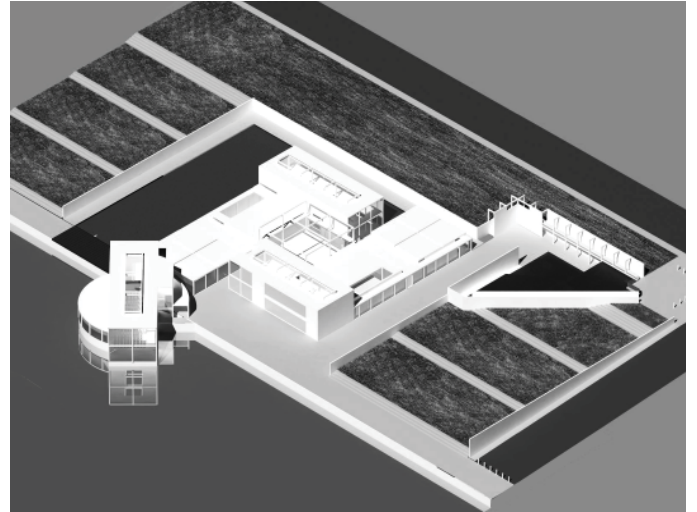
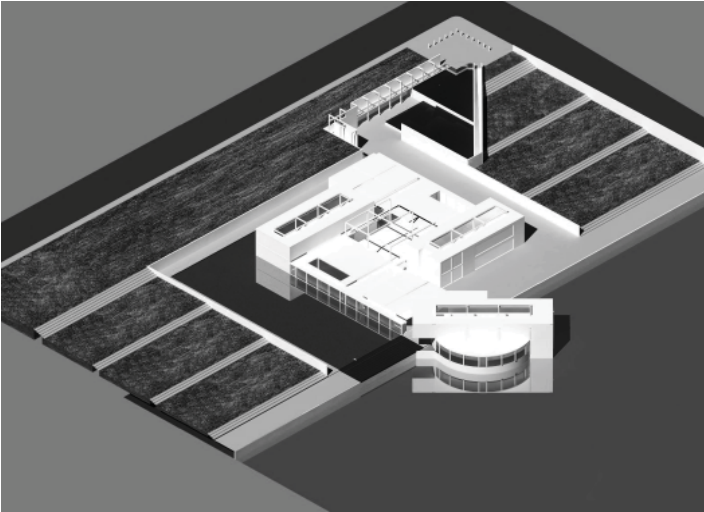
Figure I

 Circulation Pathways

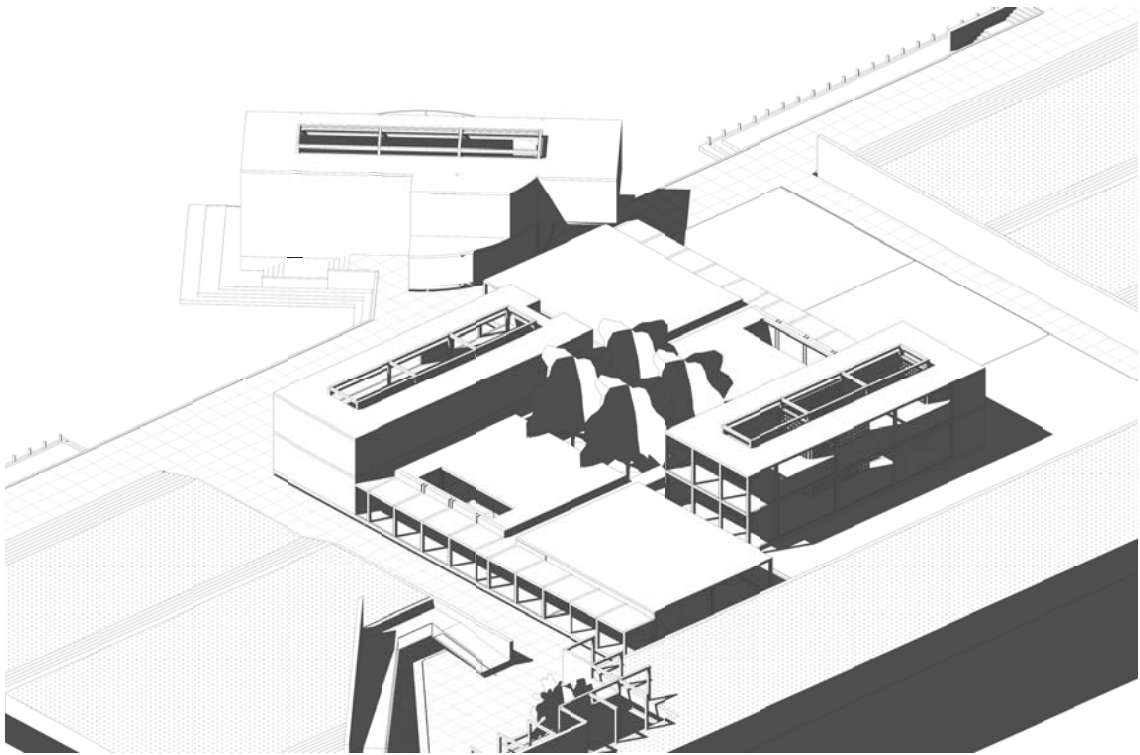
 Semi-private/ private spaces

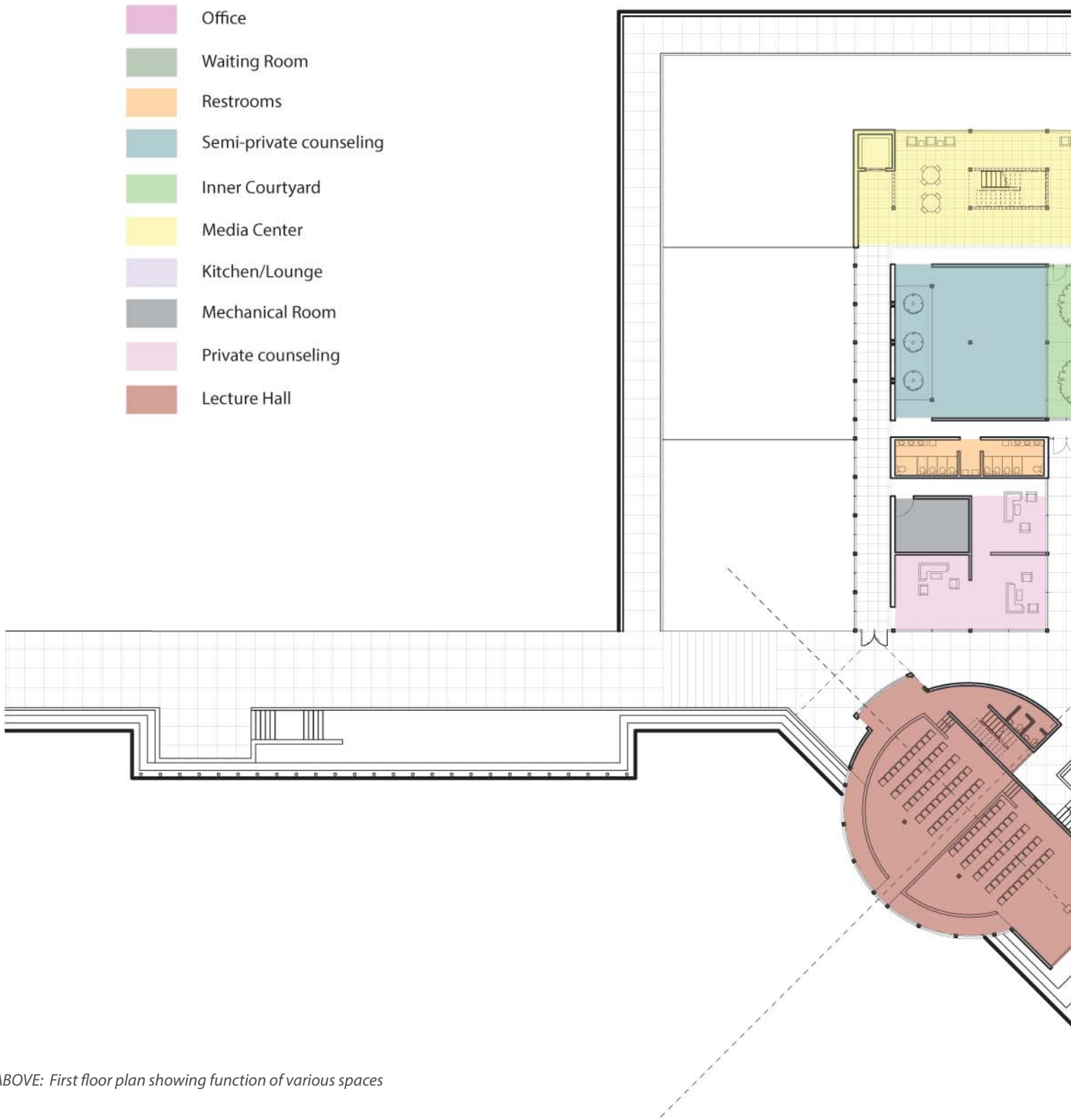
 Central Courtyard

 Public Spaces

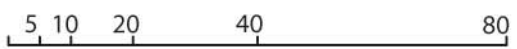
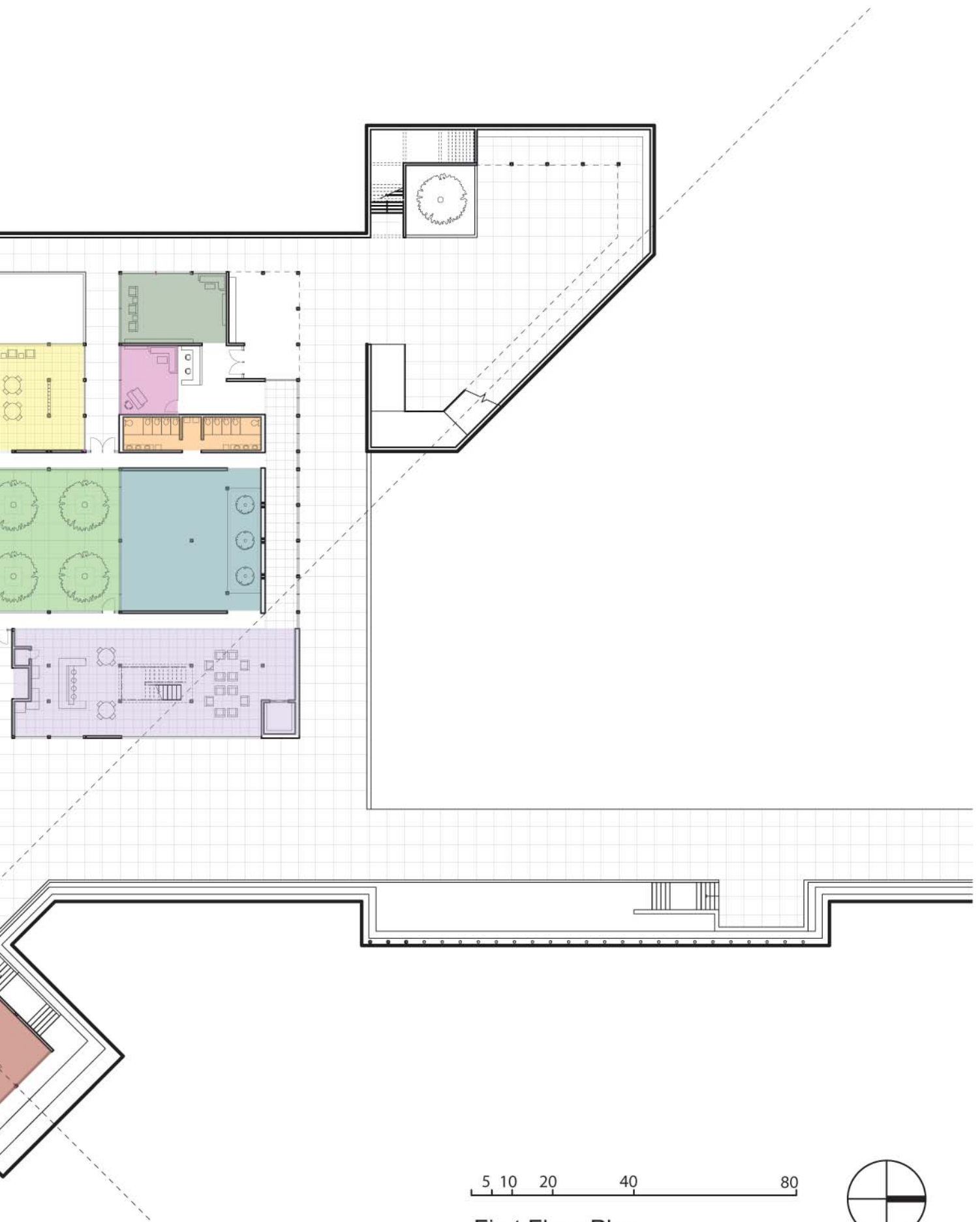


ABOVE: *Isometric Views of site model; Rhino*
RIGHT: *Isometric Views of site model; Revit*



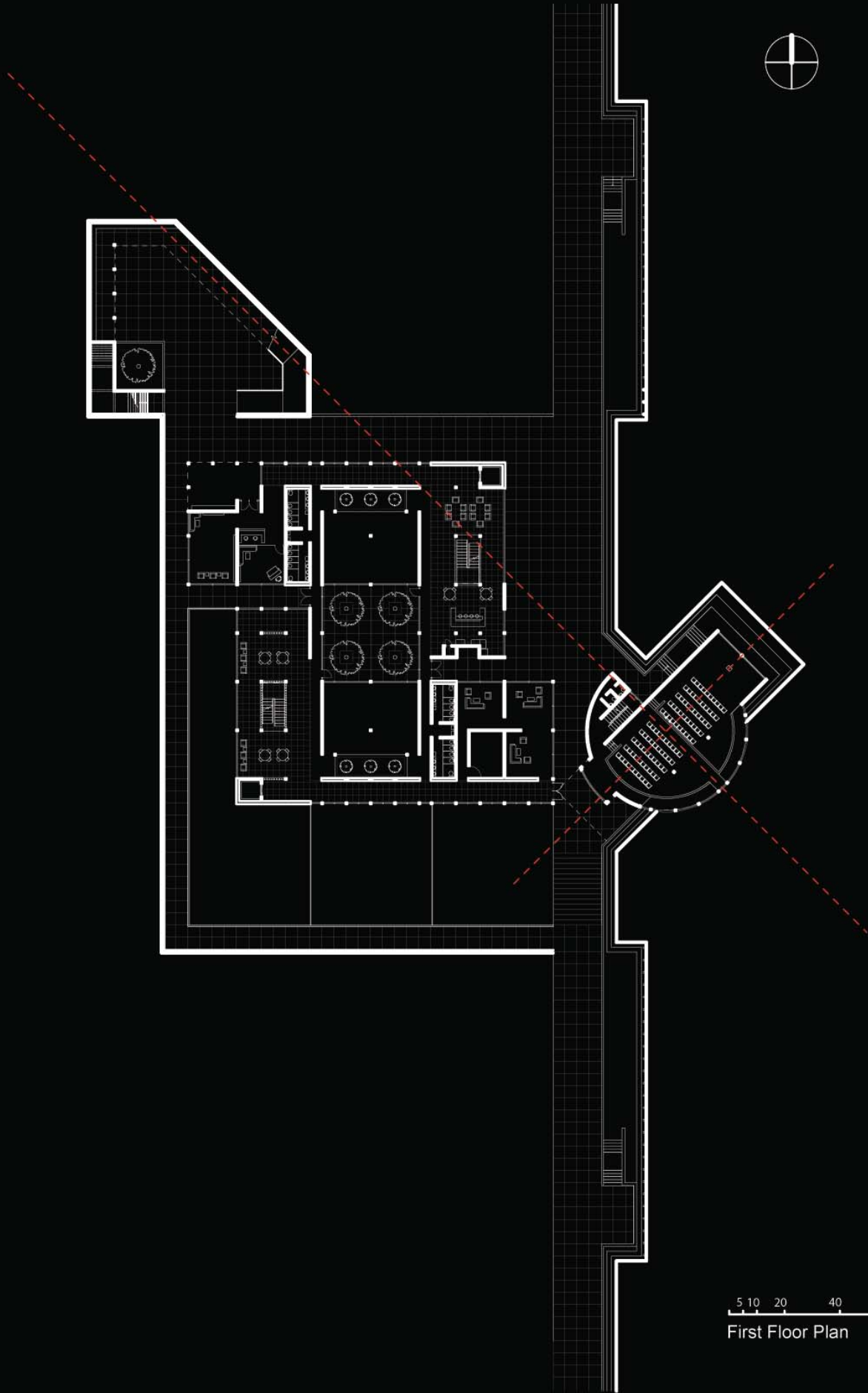


ABOVE: First floor plan showing function of various spaces

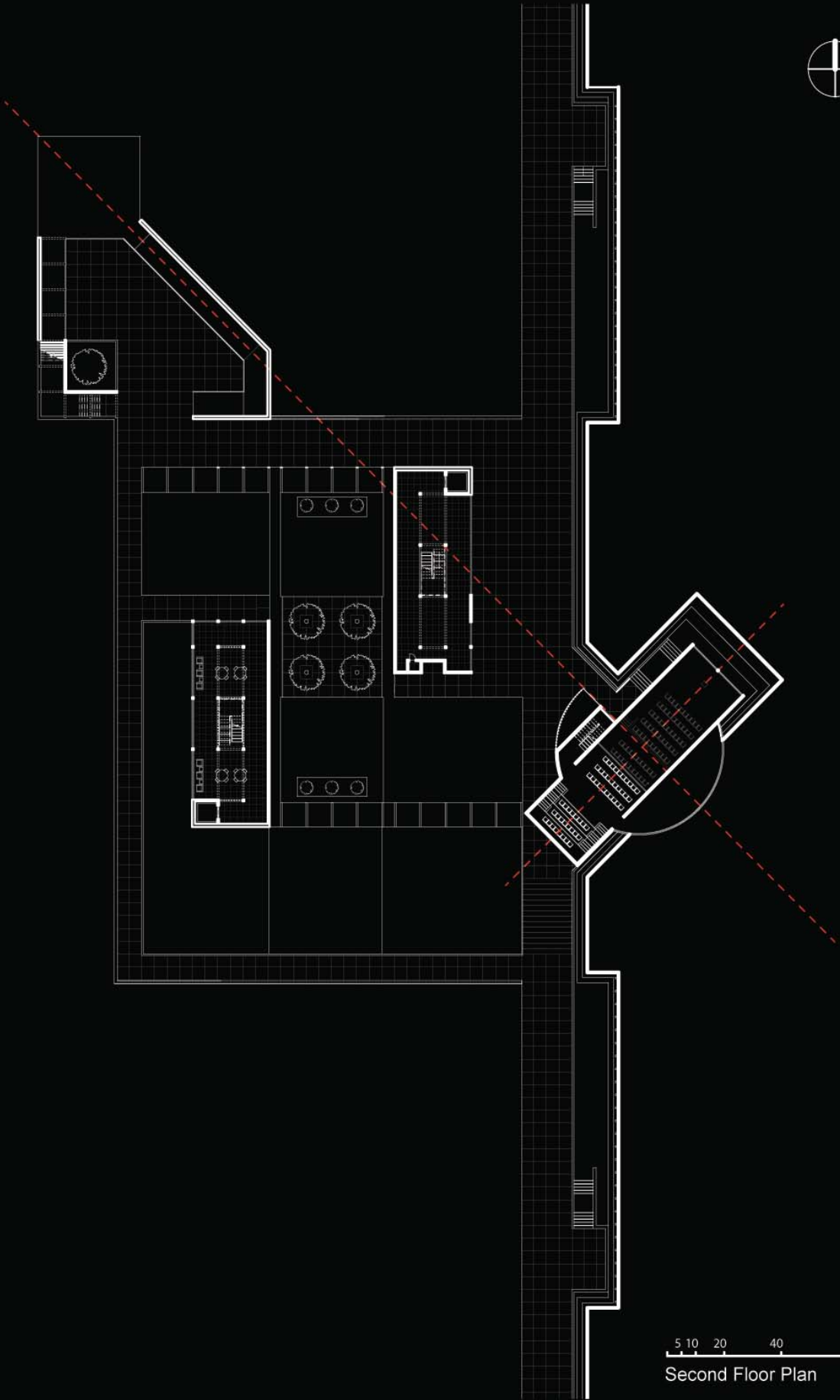


First Floor Plan

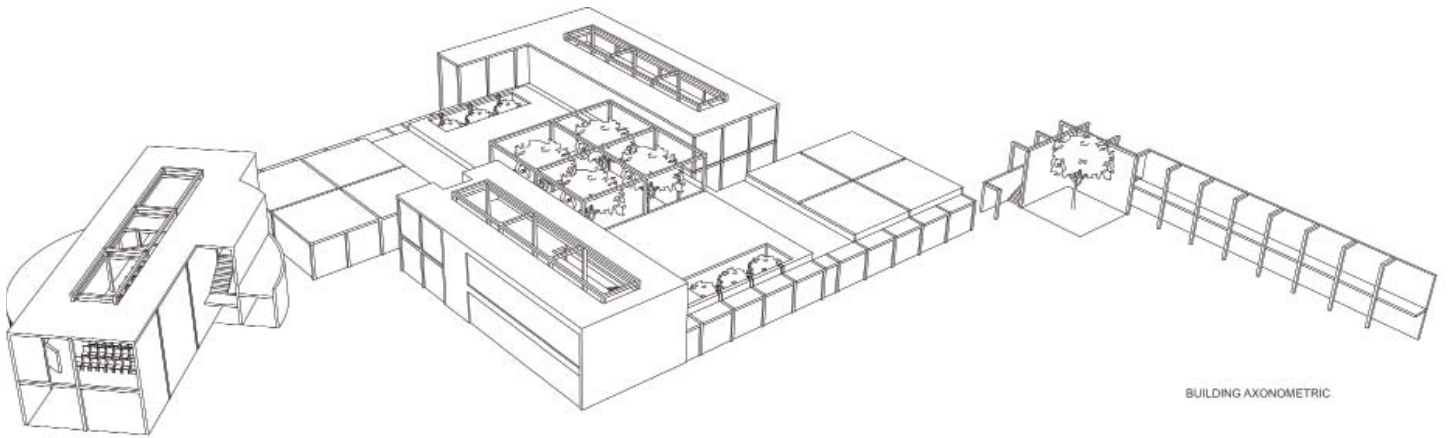




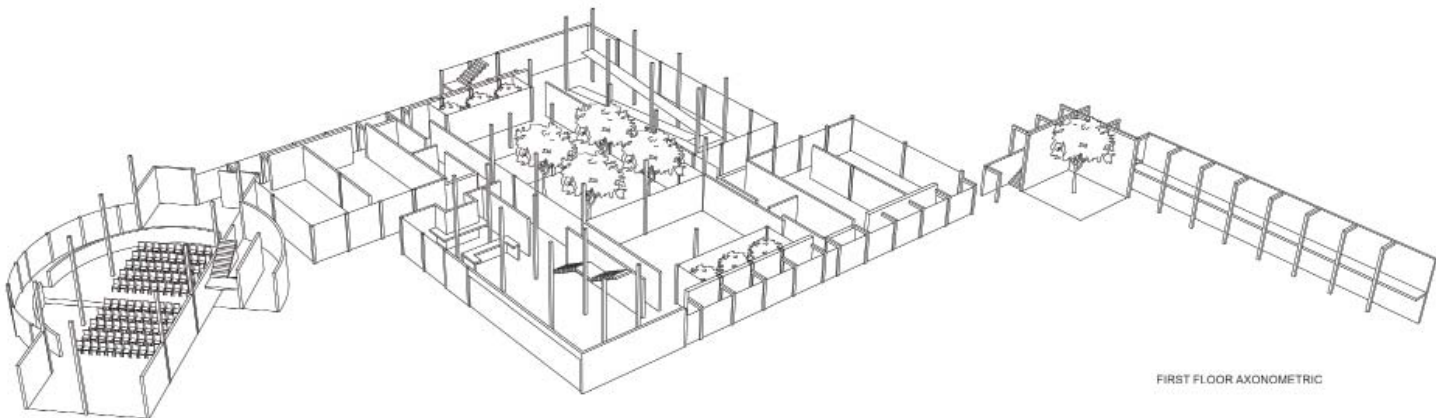
5 10 20 40 80
First Floor Plan



5 10 20 40 80
Second Floor Plan



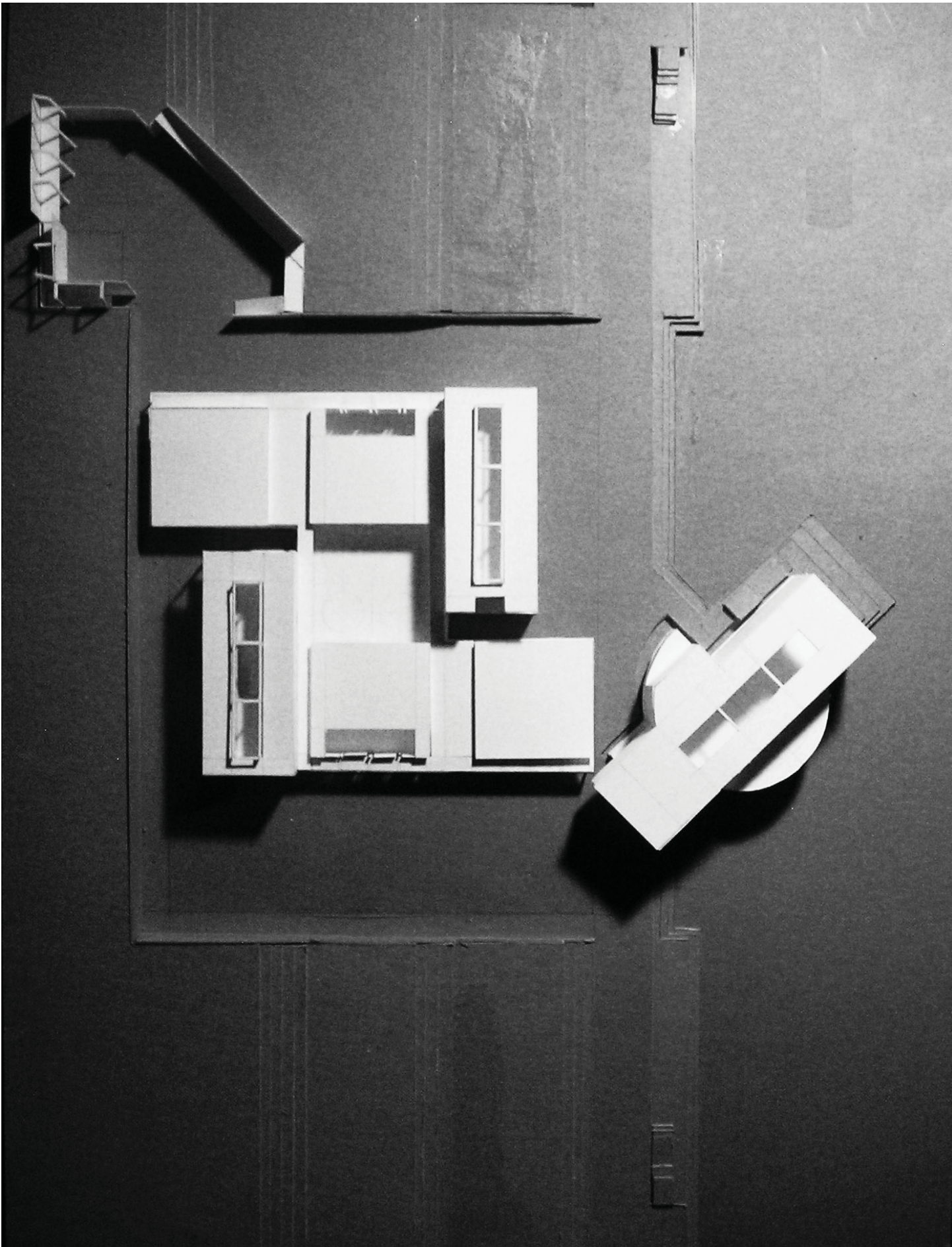
BUILDING AXONOMETRIC

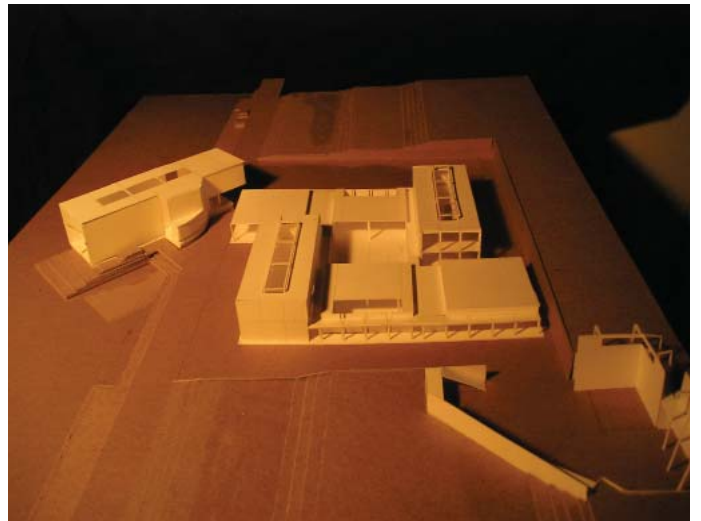
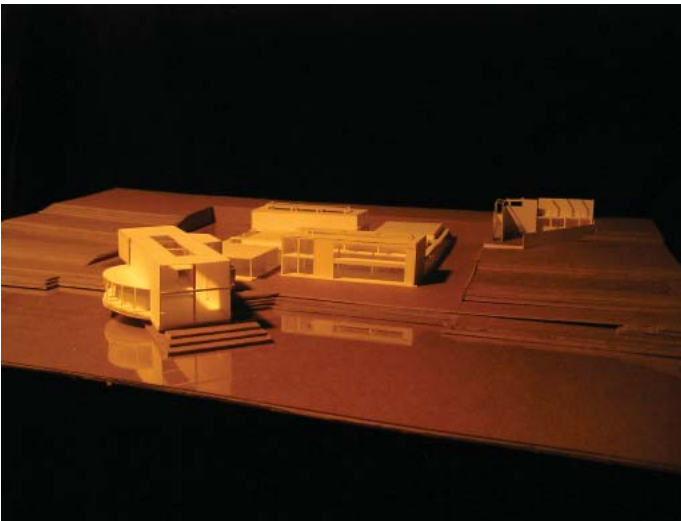
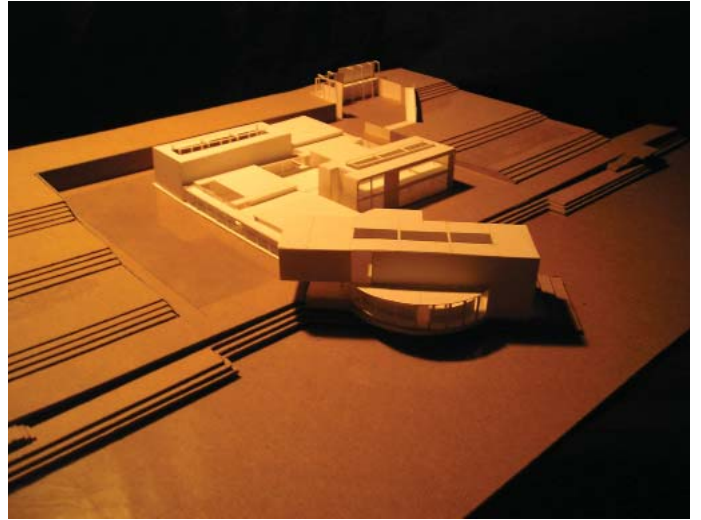
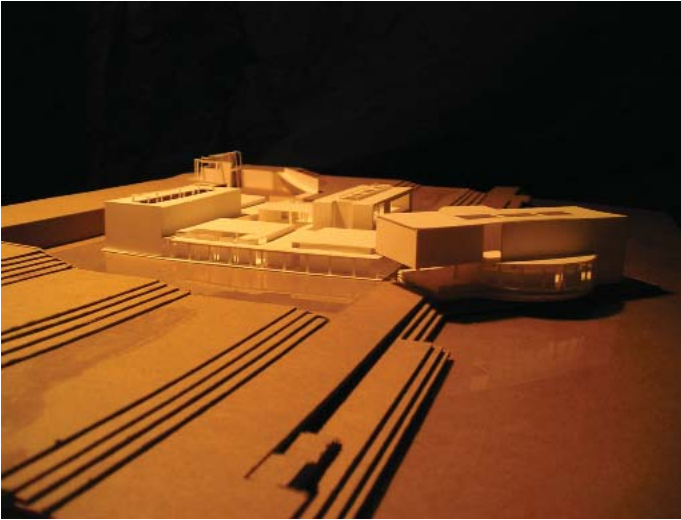


FIRST FLOOR AXONOMETRIC

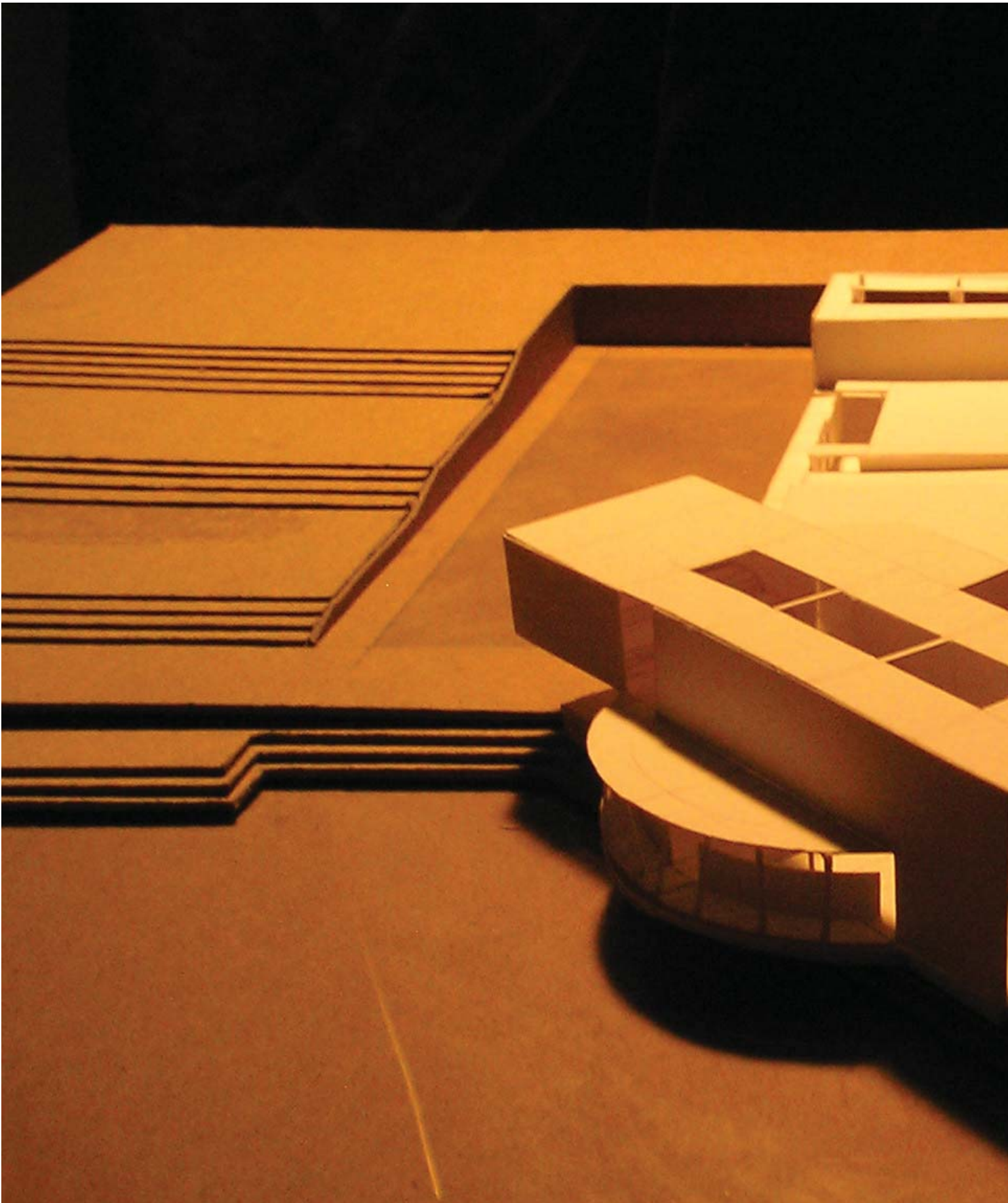
- PREVIOUS: First and Second floor plan*
- ABOVE: Overall and 1st Floor Axonometric showing regulated column scheme*
- OPPOSITE ABOVE: Northwest Elevation*
- OPPOSITE MIDDLE: Inner Courtyard Section*
- OPPOSITE BELOW: Southeast Elevation*

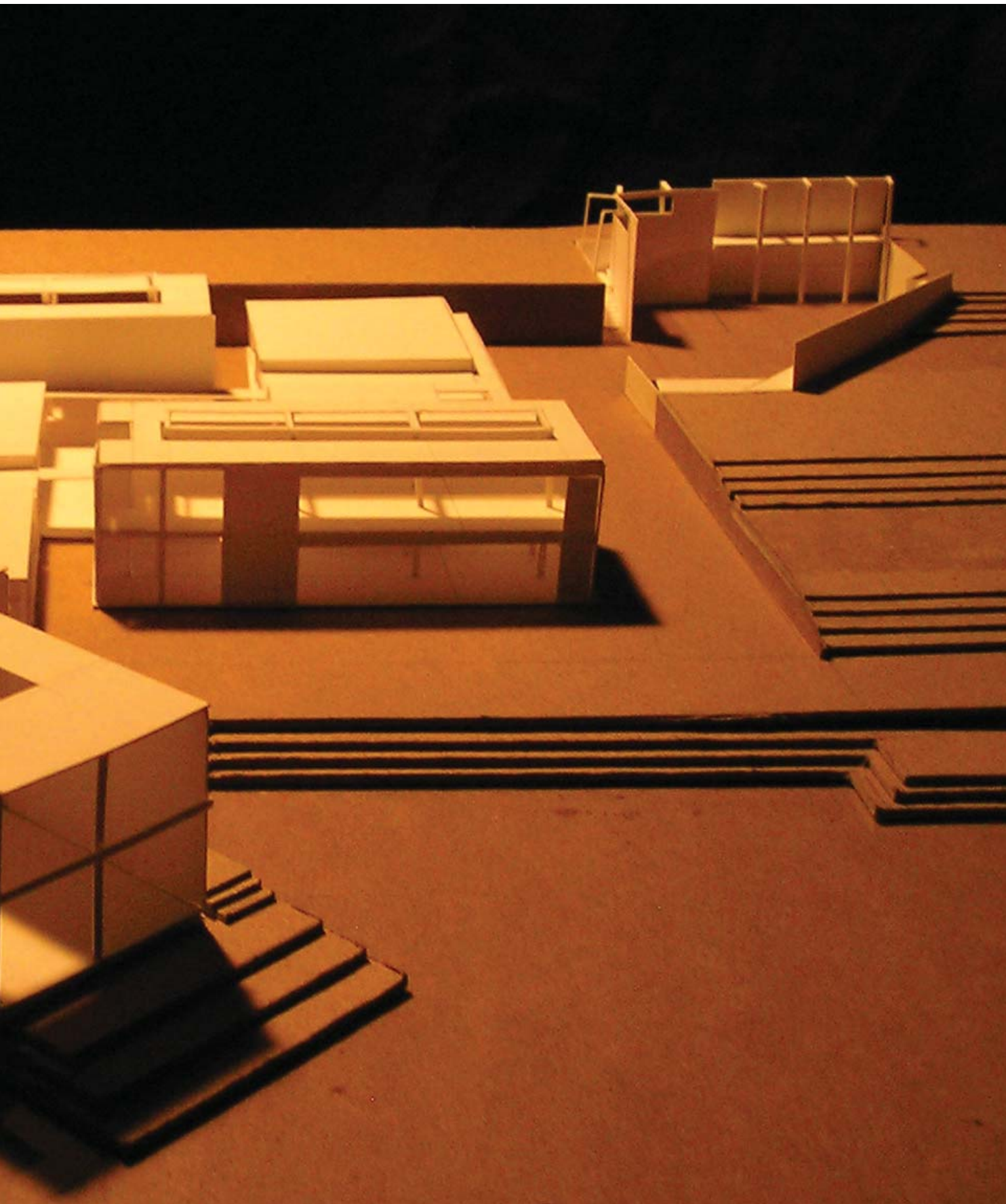






*LEFT AND ABOVE: Physical model of cancer center made from bristol board and chipboard
FOLLOWING PAGE: Physical model of cancer center made from bristol board and chipboard*



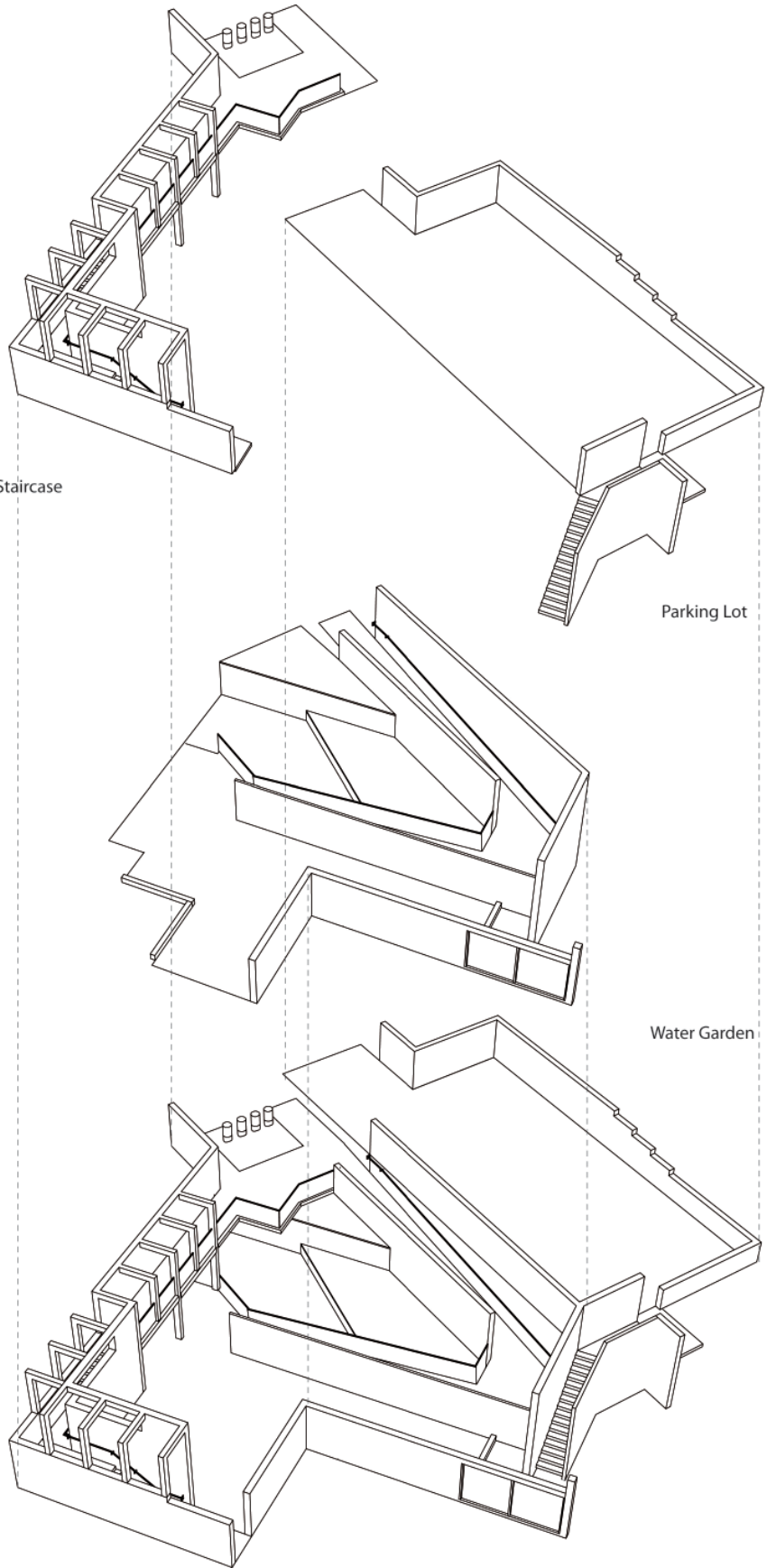


ENTRANCE

Sequential Experience of Space

The organization and design was conceived as a sequential vision of spatial experience. The building reveals itself in stages as one moves through a deliberately orchestrated series of sights, sounds, smells, and impressions. The desire is to slow the inhabitant's conception of time; heightening ones use of their mind, compelling contemplation, and creating a distinct break from the very close urban environment. This all works together in an attempt to provide a resting and contemplative space psychologically beneficial to someone struggling with cancer.

RIGHT: Exploded Axonometric illustrating some of the key components in the entrance procession



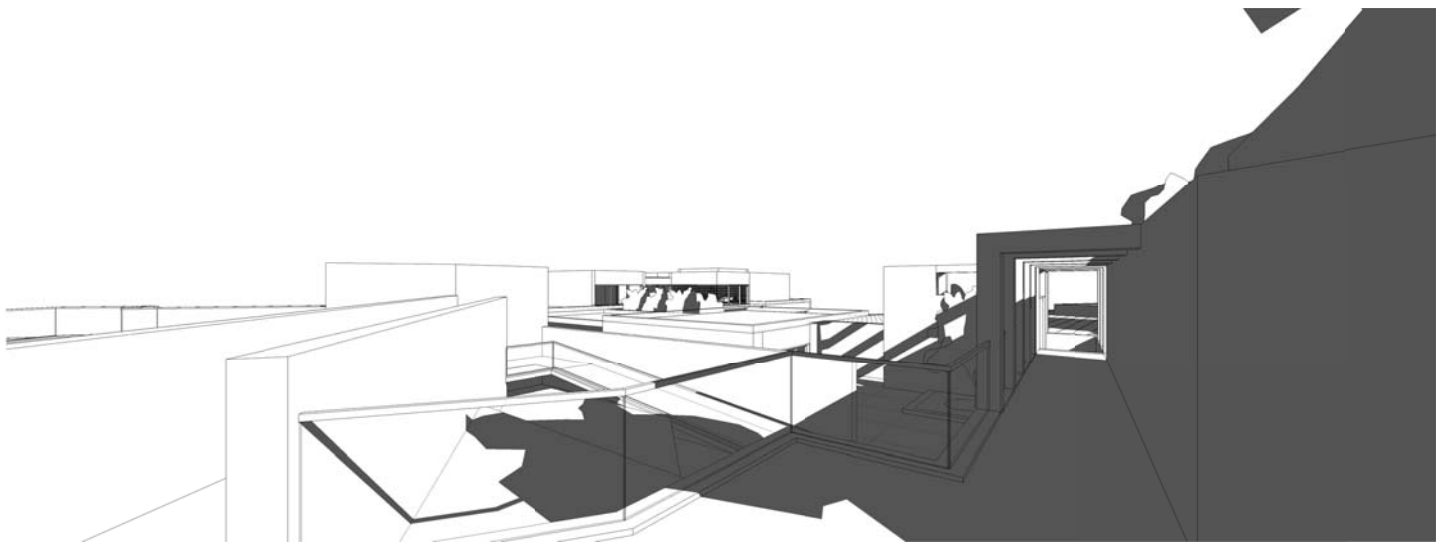
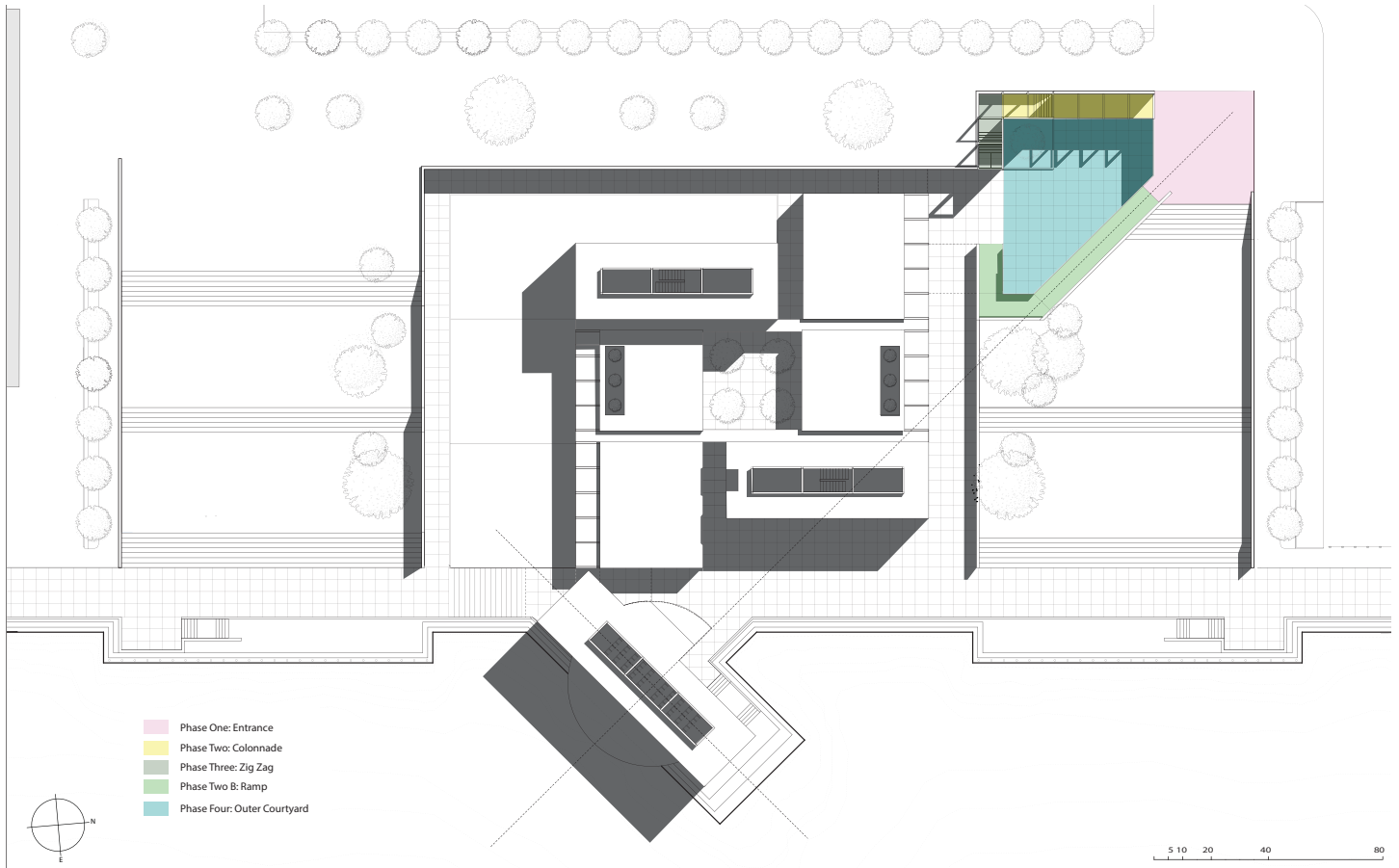
Entrance Staircase

Parking Lot

Water Garden

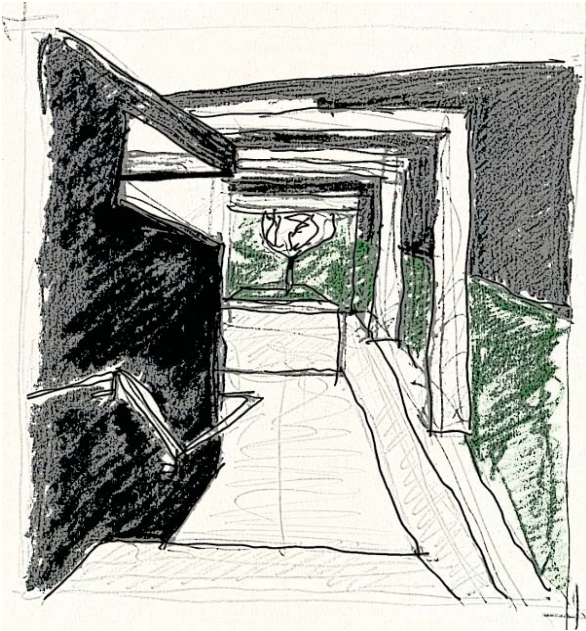
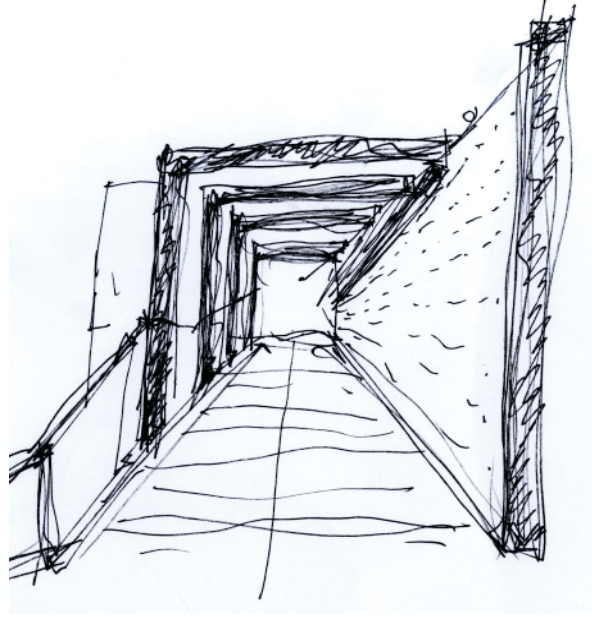
Similar to Gunter Nitschke's analysis of Shisen-do in 'Rites of Passage to Places of Stillness,' the procession into the center can be thought of as succession of phases, each seeking to slow down one's experience and gradually build tension and anticipation as one progresses inside. The initial phase in this sequence is entry on to the site. After approaching by either car or foot, one makes their way to a corner plot at the intersection of two less congested streets. Aside from those meandering down the waterfront pedestrian path, this is the entrance to the site. This entrance corner is rectangular in plan, and is the first moment in which the visitor is encouraged to pause, acclimating one for the slower pace within which this building will reveal itself. It is also here that one has their first and only direct view of the center's most sacred space, and the culmination of the sequential progression; the lecture hall. Protruding out onto the water and angled in relation to the main building, the lecture hall is introduced to one only in profile, concealing the magnificent view that one will have once they enter the lecture hall and look out onto the water. It is an attempt to peak one's interest and attention, without revealing too much. Here one is encouraged to choose their path of entrance, a ramp leading down in a courtyard, or a colonnade with a wall to the parallel road.

The next phase in the sequential process of slowing down time is what Nitschke refers to as a 'time tunnel.' *"Scientific investigations into man's interaction with his environment have shown that there are upper and lower limits to the rate of input of environmental stimuli for the healthy functioning of the human organism. If input is too low, the human being will automatically try to increase it by either moving faster through an impoverished environment or by creating additional stimuli (mental activity) from within himself to substitute for the outer deprivation. (Here) time is perceived to be longer than clock time."*¹ Choosing to walk through the colonnade rather than down the ramp, one walks between a wall and a series of L shaped poured in place columns. This sequence was heavily inspired by the work of Tadao Ando, and his use of these 'time tunnels' as a means to slow one's entrance, as well as introduce themes which will be present once the destination has been reached. The placement and rhythm of structural columns which will continue into the Center are introduced here first. In addition, the L shape of the column gives the impression of walking underneath something. While adequate headroom is provided,



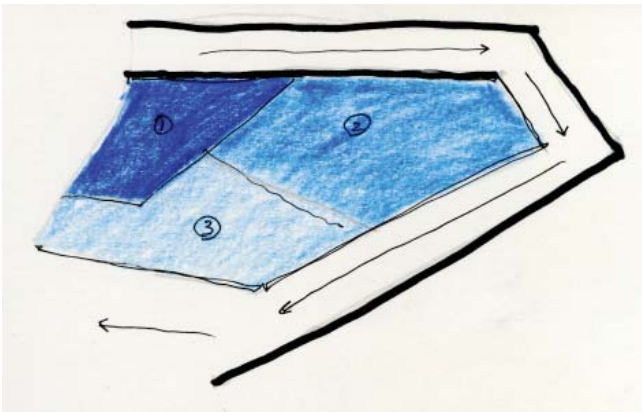
ABOVE (TOP): Plan showing sequential stages of procession towards entrance.

ABOVE (BELOW): Digital sketch showing stage one, entrance to site from street



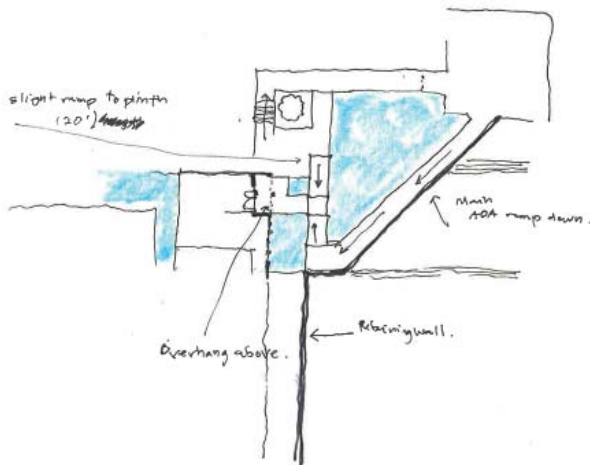


*OPPOSITE (ABOVE LEFT): Photo of Tadao Ando's Yumebutai
Teahouse, photo by author
OPPOSITE (ABOVE RIGHT): Sketch of entrance colonnade
OPPOSITE (BELOW LEFT): Sketch of entrance colonnade
OPPOSITE (BELOW RIGHT): Sketch of entrance colonnade
ABOVE: Rhino render, Entrance colonnade*



one does feel that they are being compressed spatially. This spatial compression will be contrasted later when one reaches the outer courtyard, "If one wants to enlarge, one first reduces experientially"².

At the end of this colonnade, another technique is used to increase our experience of the space. A right angle is introduced, forcing one to change direction and further increase the time spent in procession. "With a consciously created detour, the beginning and the end of our journey is set experientially farther apart"³. This turn also serves to connect two places (colonnade and outer courtyard), and mentally connects a space which one moves through with a space in which one pauses.



If one did not choose to use the colonnade as a means of circulation, they are able to use a ramp to access the Center's entrance. This gradual ramp angles down towards a courtyard, and while it begins with an unobstructed view of the lecture hall, as one decreases in elevation this view becomes obscured. It is a meandering ramp, turning back on itself to provide views as well as slowing down the procession. It wraps around a terraced water feature, with three regions where the water sits before napping over an edge. The sound of the water can be heard, and the coolness of water mist can be felt. After turning back on itself, the ramp continues down to an open courtyard with covered seating that provides a view back to the water feature.

One final 'time slowing' technique is employed before one enters the Center. After either descending down a set of stairs after moving through the colonnade, or descending down a ramp wrapping a water feature, one moves into an open courtyard space. Here you are invited to stop and rest before entering into the center. Using Ando's Rokko Chapel as a precedent, a carefully planned view of a tree is provided, forcing the viewer to turn back the direction they came contributing as a place to pause and rest.

ABOVE (TOP): Sketch of entrance water element

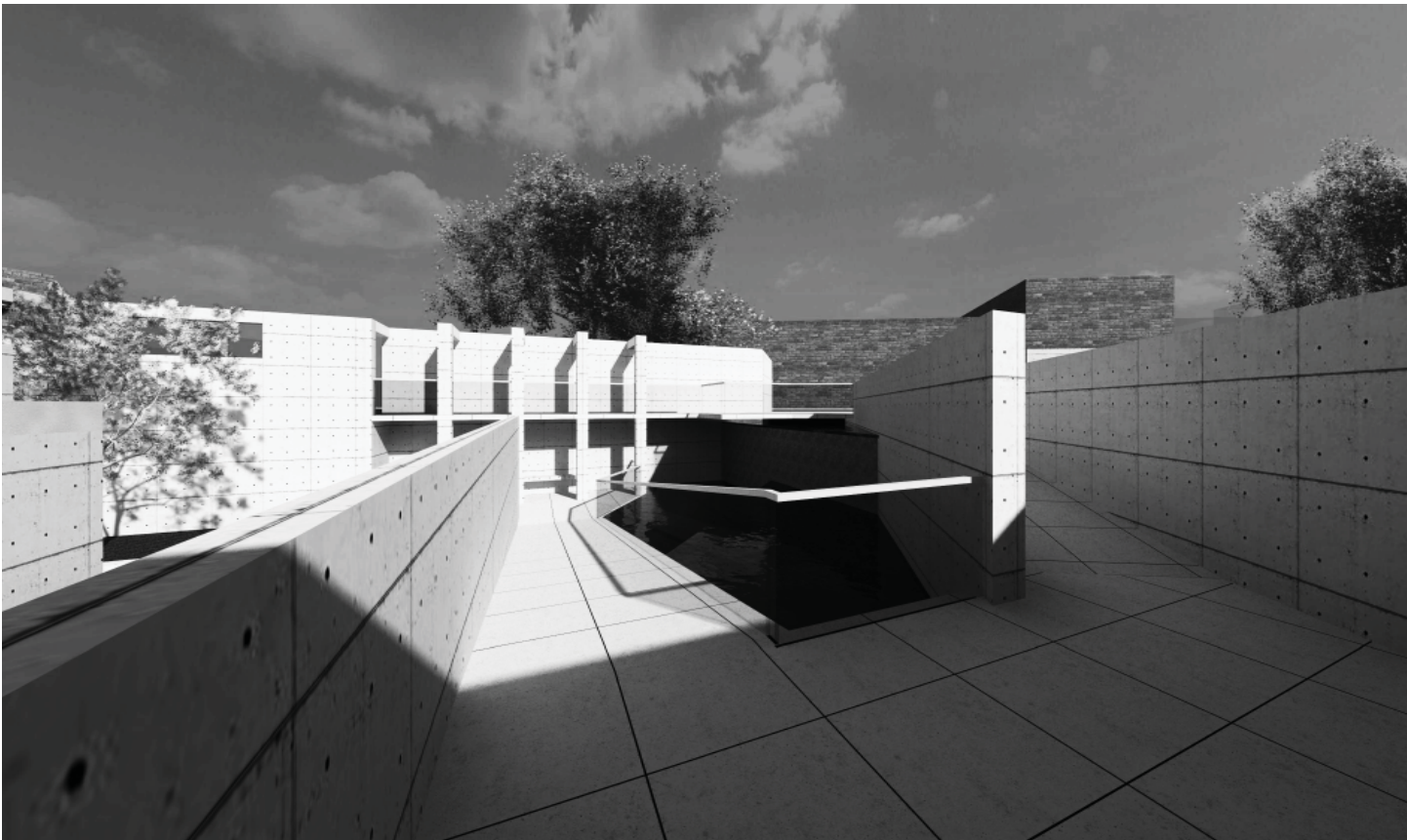
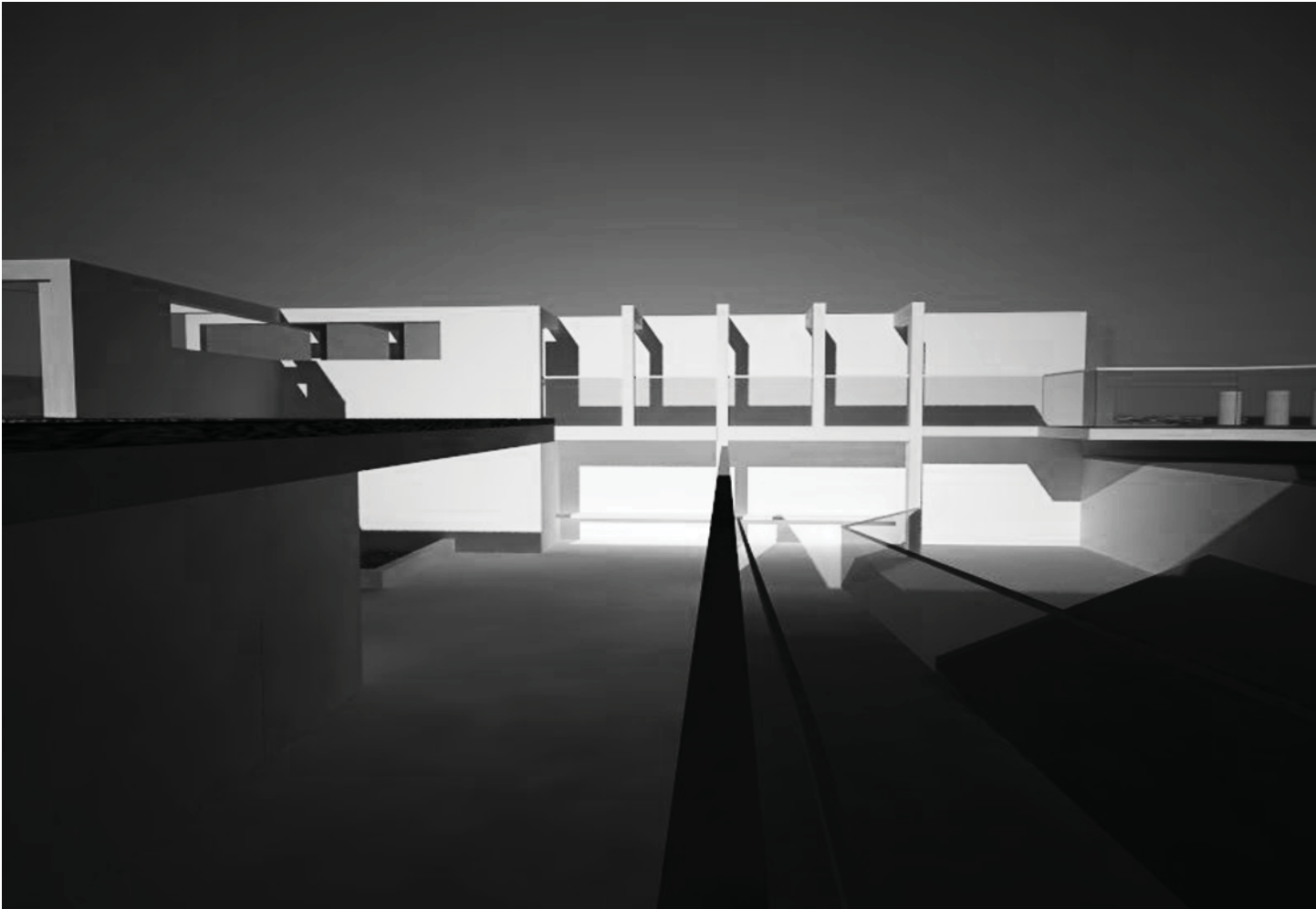
ABOVE (BELOW): Sketch of entrance ramp

OPPOSITE (ABOVE): Early Rhino render, Entrance ramp

OPPOSITE (BELOW): Later Revit render, Entrance ramp and water element

NOTES

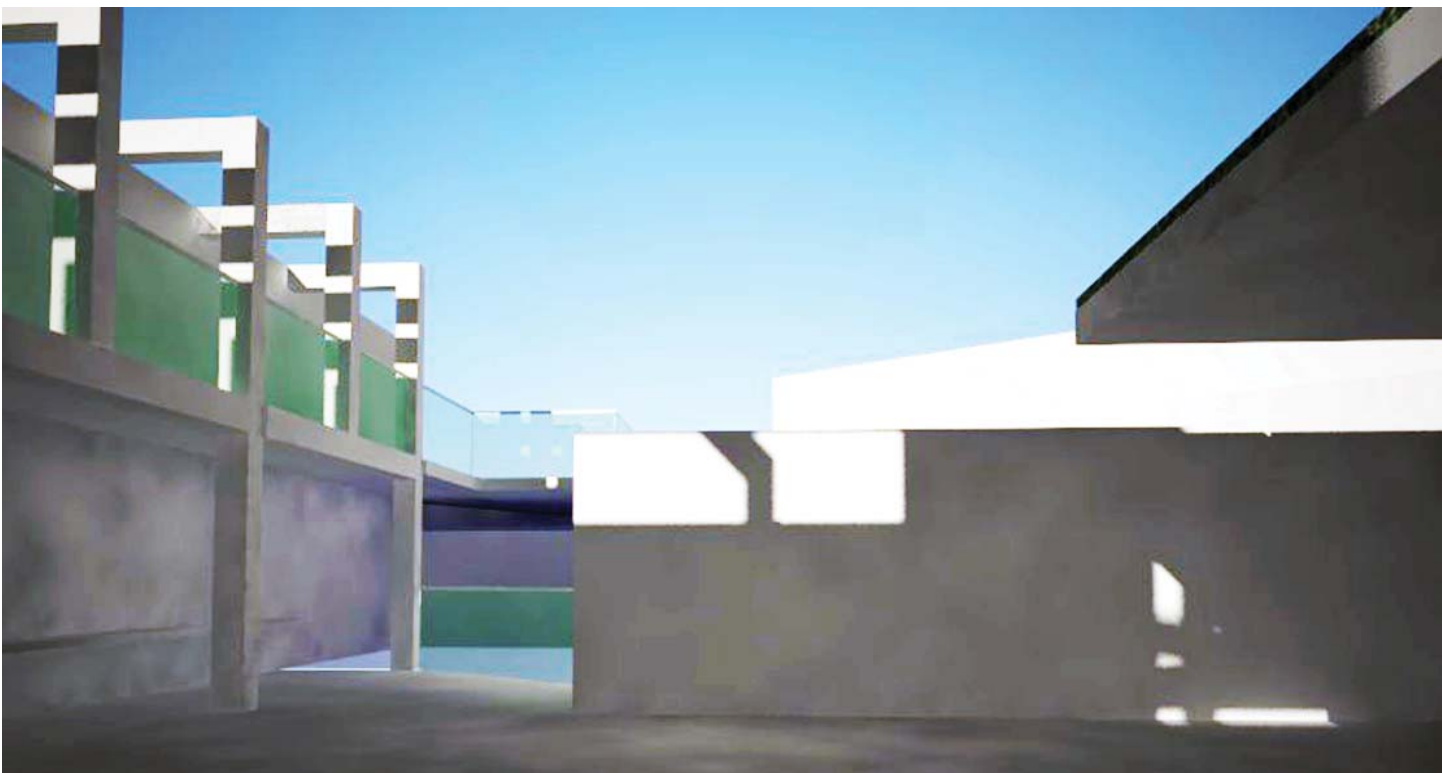
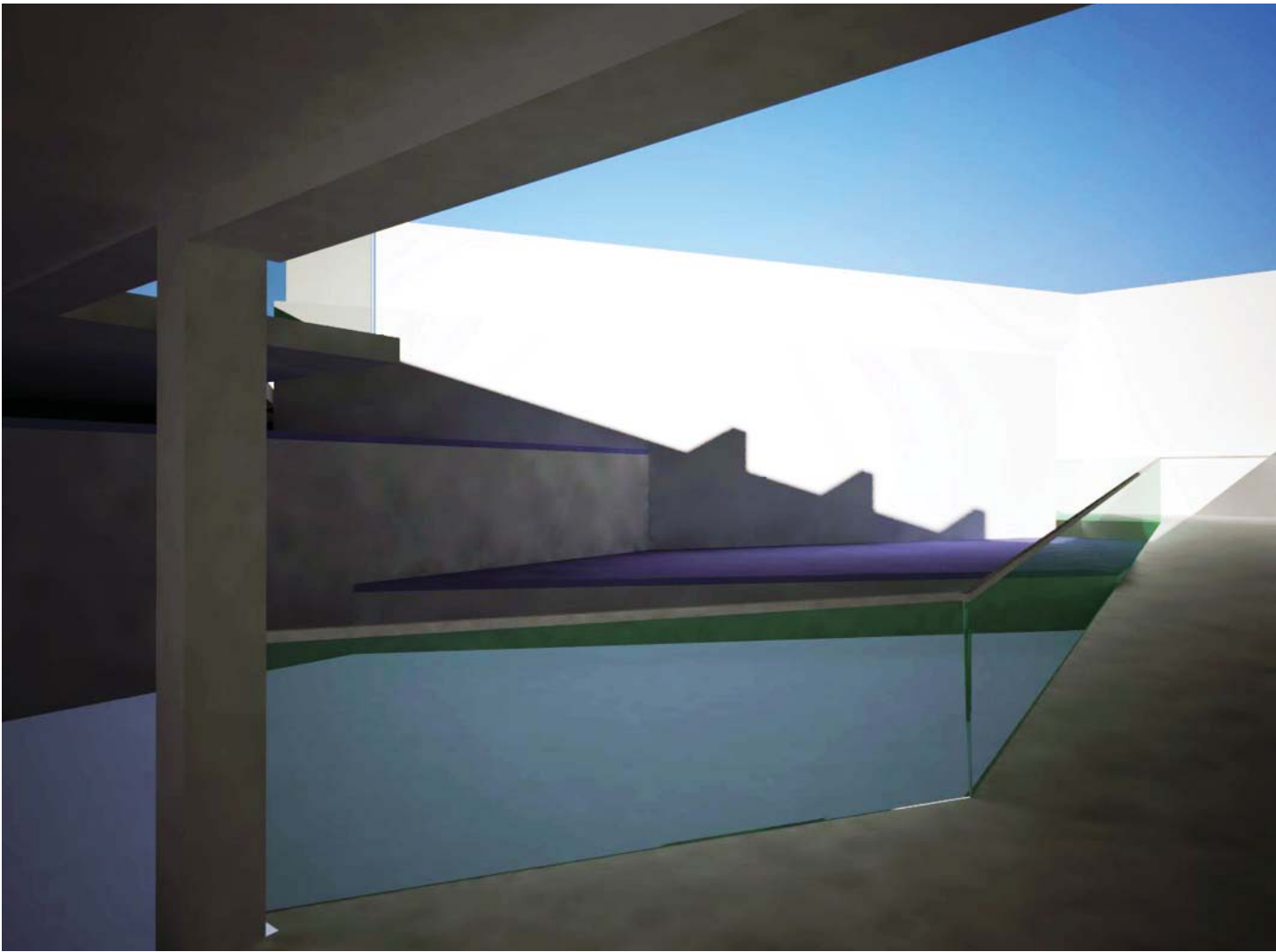
1. Nitschke, Gunter. From Shinto to Ando: Studies in Architectural Anthropology in Japan. Academy Editions Press (London) 1993, pg 37.
2. Ibid, pg 37.
3. Ibid, pg 37.





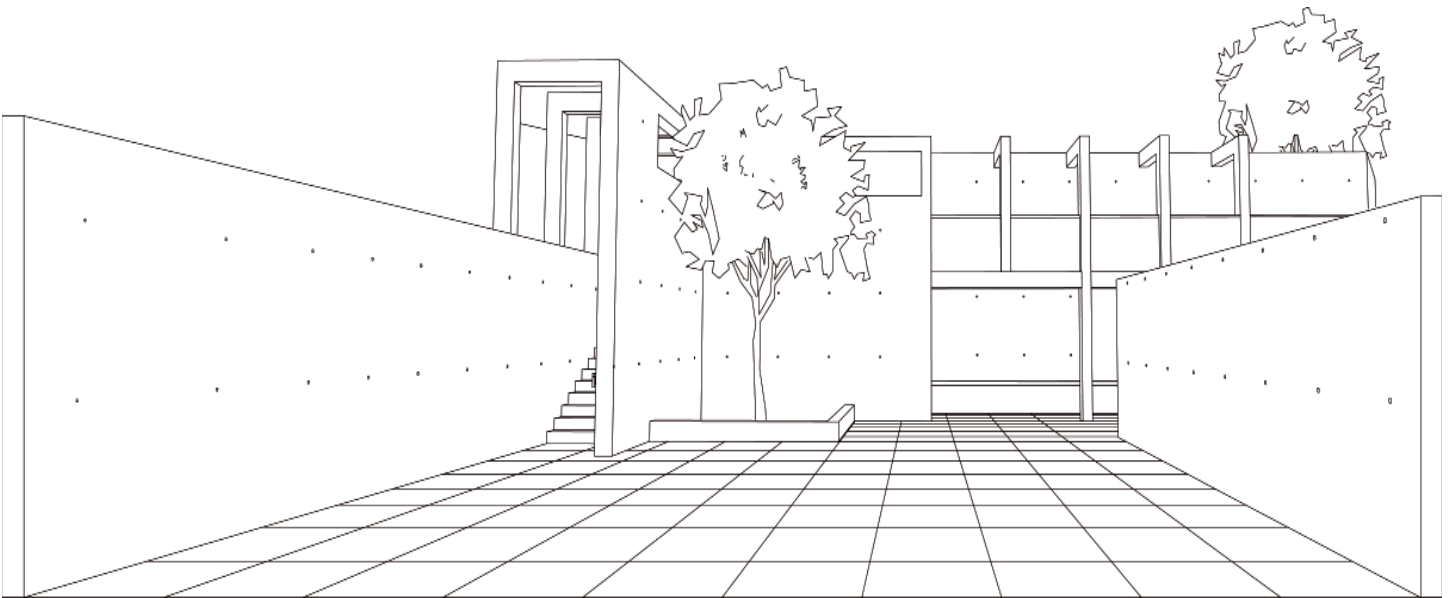


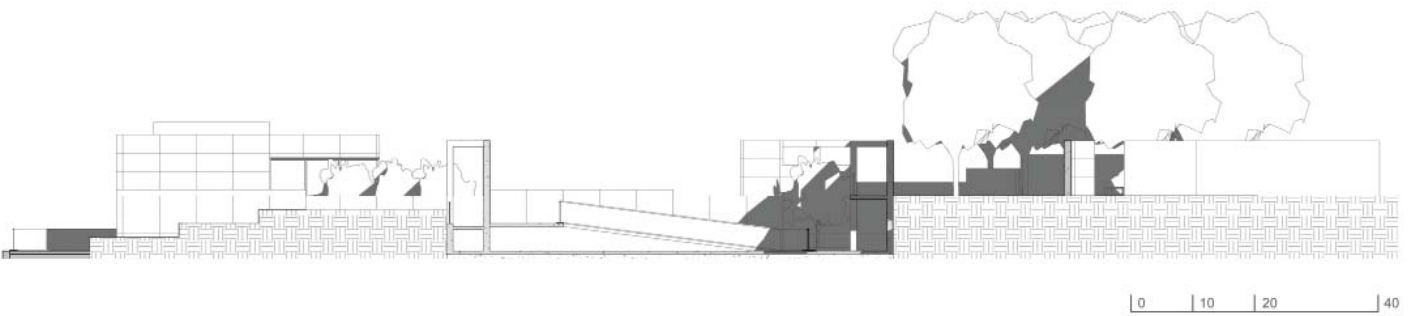
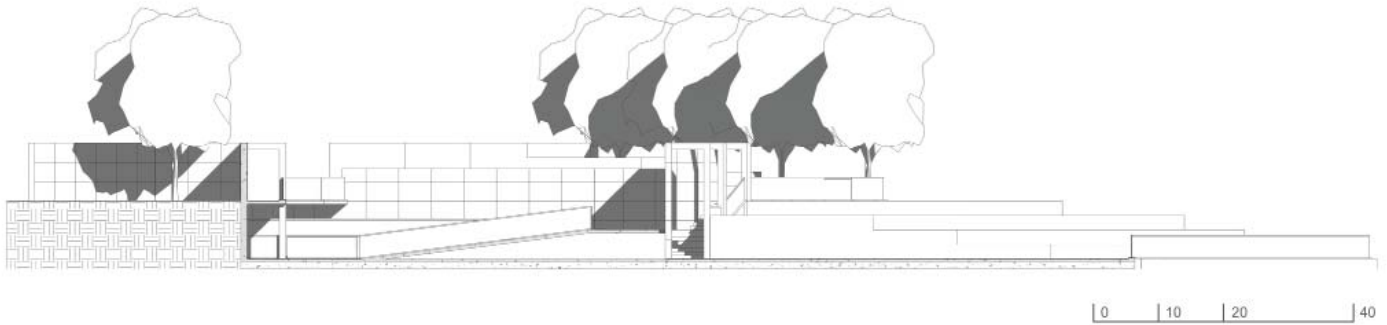
ABOVE: Revit render of entrance ramp and water element





*OPPOSITE (ABOVE): Early Rhino render, Entrance ramp
OPPOSITE (BELOW): Early Rhino render, Entrance courtyard
ABOVE: Early Rhino Render, Colonnade zig zag before Courtyard*





OPPOSITE LEFT: Rokko Chapel designed by Tadao Ando (1986) End of enclosed tunnel with framed view of nature. Photo by author.

OPPOSITE RIGHT: Early sketch of entrance staircase

OPPOSITE BELOW: Early drawing of entrance courtyard and staircase

ABOVE TOP: North-South section of entrance courtyard, facing North.

ABOVE BELOW: North South section of entrance ramp, facing South.





ABOVE: Revit render, Entrance Courtyard

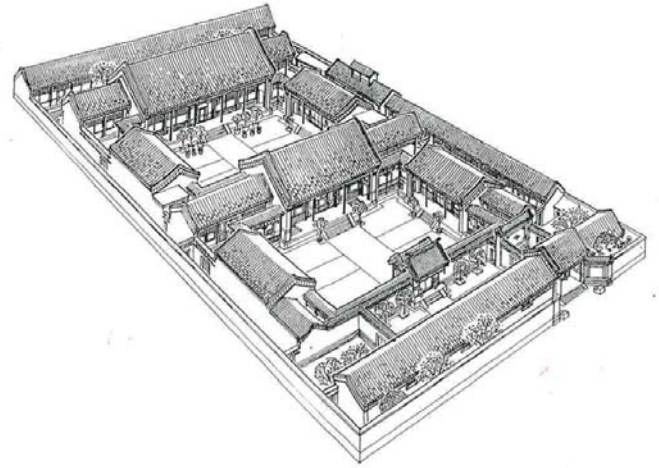
INNER COURTYARD

Group Consolation and Contemplation



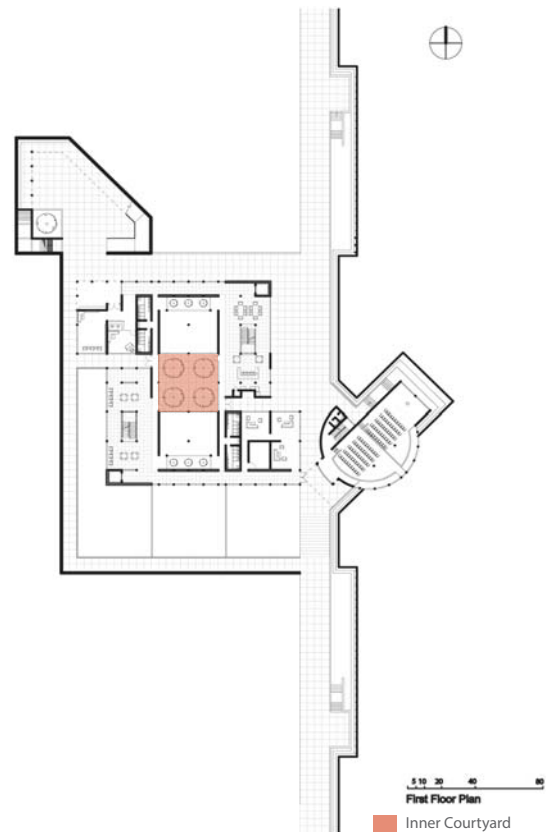
The inner courtyard is the next main space in ones progression through the site. Located in the direct center of the building, its placement and plan derived from the nine square grid (see 'Building Organization'). This space was conceived as an outdoor room; bound on four sides but open to the sky. Given its contact with the elements and it's adequate space for planting, this space took on a contemplative tone, and was therefore used as a backdrop for the two group counseling spaces which border it with curtain walls North-South. Curtain walls also border the courtyard East-West, these are circulation corridors running through the building.

The Chinese courtyard house (Hutong) served as a model for this space. Having had an opportunity to tour a number of these around Beijing and Shanghai in 2004, I was struck how compelling the space was. These open courtyards provide contact with the elements, place for outdoor activities, and a beautiful backdrop for interior rooms. In the center I sought to instill many of these same characteristics. Like many of the traditional Chinese courtyard homes, the Center's East-West sides are circulation corridors while the North-South sides are inhabitable rooms. However, not being constrained to traditional Chinese building materials, I made the walls to this outdoor room glass, and therefore provided additional views, light, and air to enter from outside to inside. Similar to the Chinese version, I saw the open courtyard as an opportunity for planting trees.



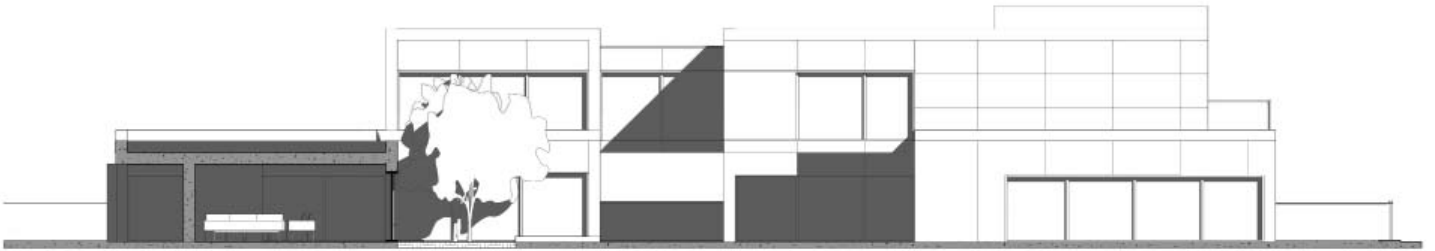
The final version of the inner courtyard with four walls wrapping an 'outdoor room' is not the only version of this space that was designed. An earlier version also exists. In this iteration, the courtyard is only bound on three sides, with the fourth side providing access to the pedestrian waterfront. Here, the courtyard was not a center room but rather a private garden/plaza that one walked around. It featured a portion of the second floor cantilevering over it, as well as a reduced number of plantings. While there were elements of this version that are pleasant, its placement within the Center as a whole was not ideal. But it was from working through this early version of the inner courtyard that the final version took its shape.

The inner courtyard's final form maintains the four bordering walls as a key component. This works to support this space as a place for reflection and contemplation. Individuals sitting in the group counseling rooms have a beautiful natural space to look out upon while they struggle with very trying personal issues. The two circulation corridors on the East and West side allow people moving from one side of the Center to the other to pass by and have a look at the trees and sky. Hopefully, the view is enticing enough that it will compel them to walk into the courtyard and spend some time outside. Like the Chinese courtyard house, this space is both a scenic backdrop and a functional outdoor area.

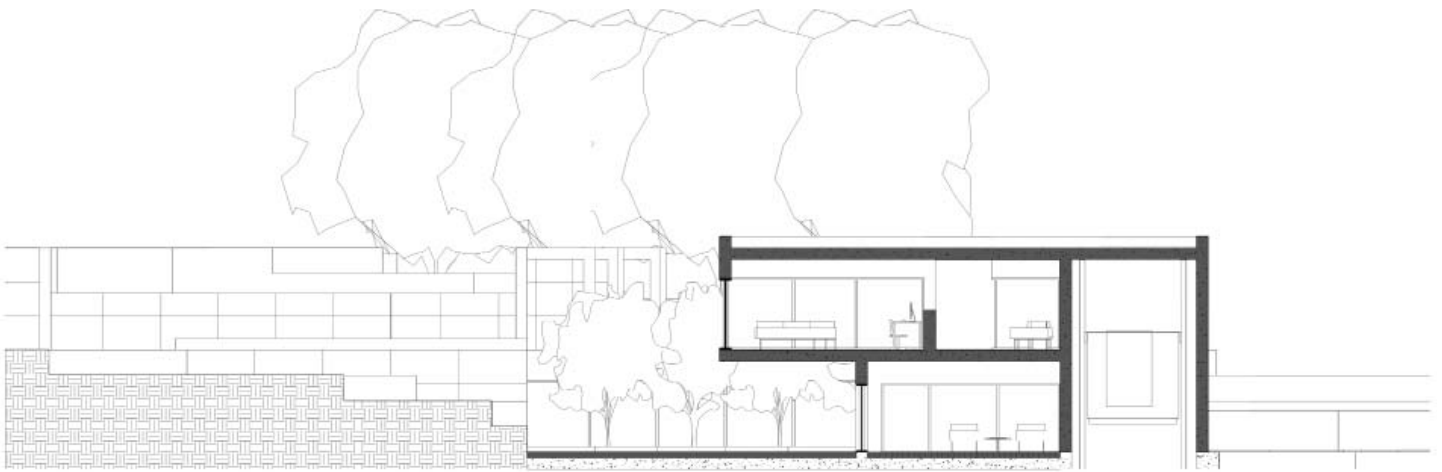


OPPOSITE: Lu Xun Chinese courtyard House, Beijing China. Photograph from *Chinese Architecture* (Xinian, Fu)
ABOVE (TOP): Axonometric drawing of Chinese courtyard house. Taken from *Chinese Architecture* (Xinian, Fu)
ABOVE (BELOW): First floor plan showing inner courtyard area.





0 | 10 | 20 | 40



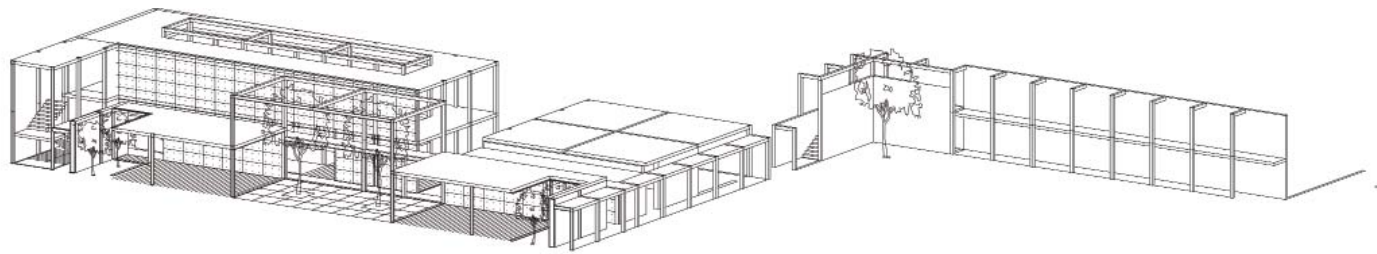
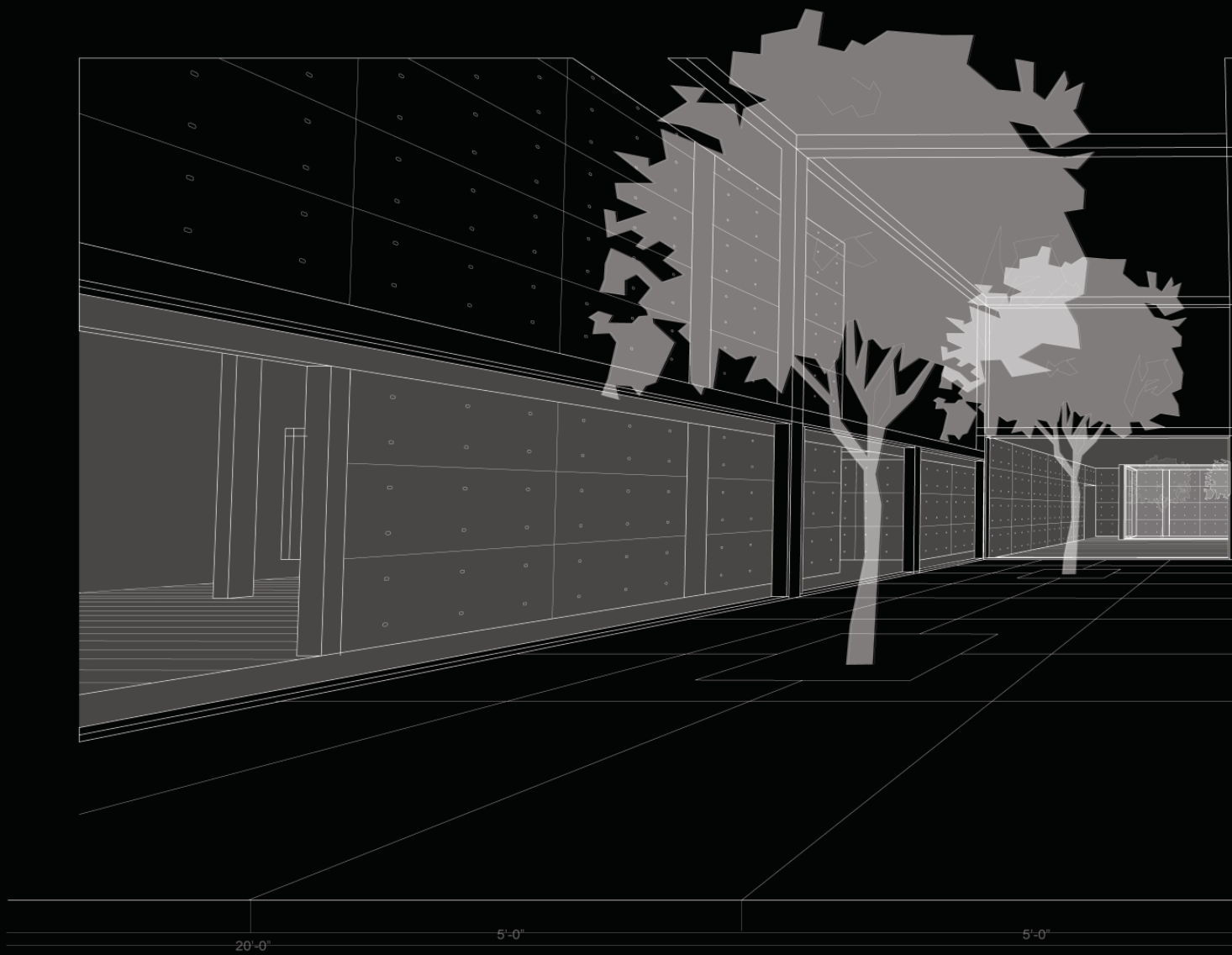
0 | 10 | 20 | 40

OPPOSITE (ABOVE): Revit render, early version of inner courtyard, day

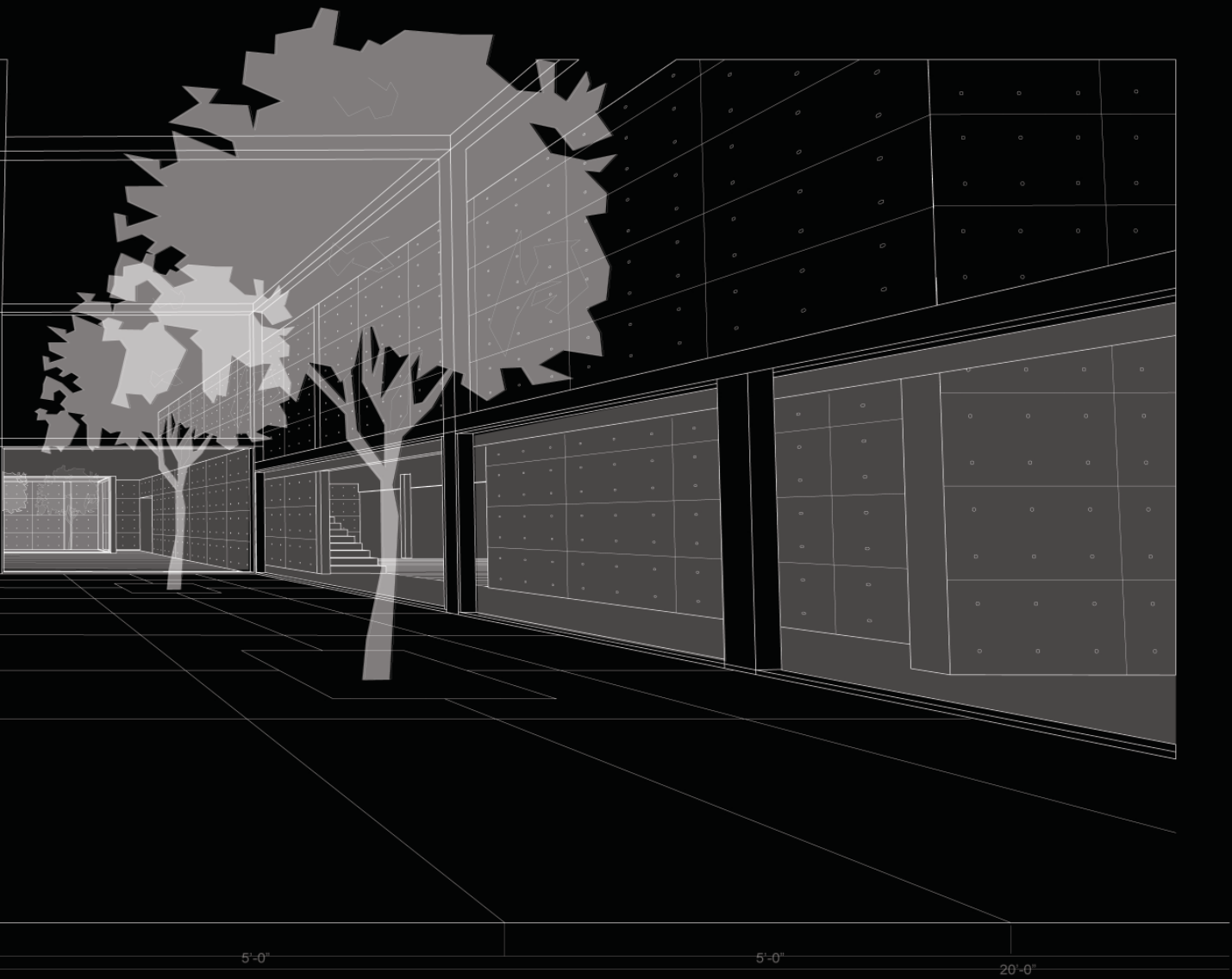
OPPOSITE (BELOW): Revit render, early version of inner courtyard, night

ABOVE (TOP): Section, early version of inner courtyard

ABOVE (BELOW): Section, early version of inner courtyard

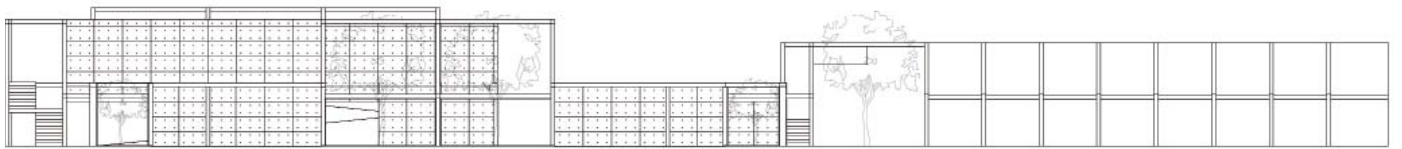


COURTYARD SECTION PERSPECTIVE



COURTYARD PERSPECTIVE

OPPOSITE : Final version, inner courtyard, section perspective
ABOVE: Final version, inner courtyard, perspective



0 10 20 40



*OPPOSITE : Final version, inner courtyard, section
ABOVE: Revit render, final version, inner courtyard, perspective*

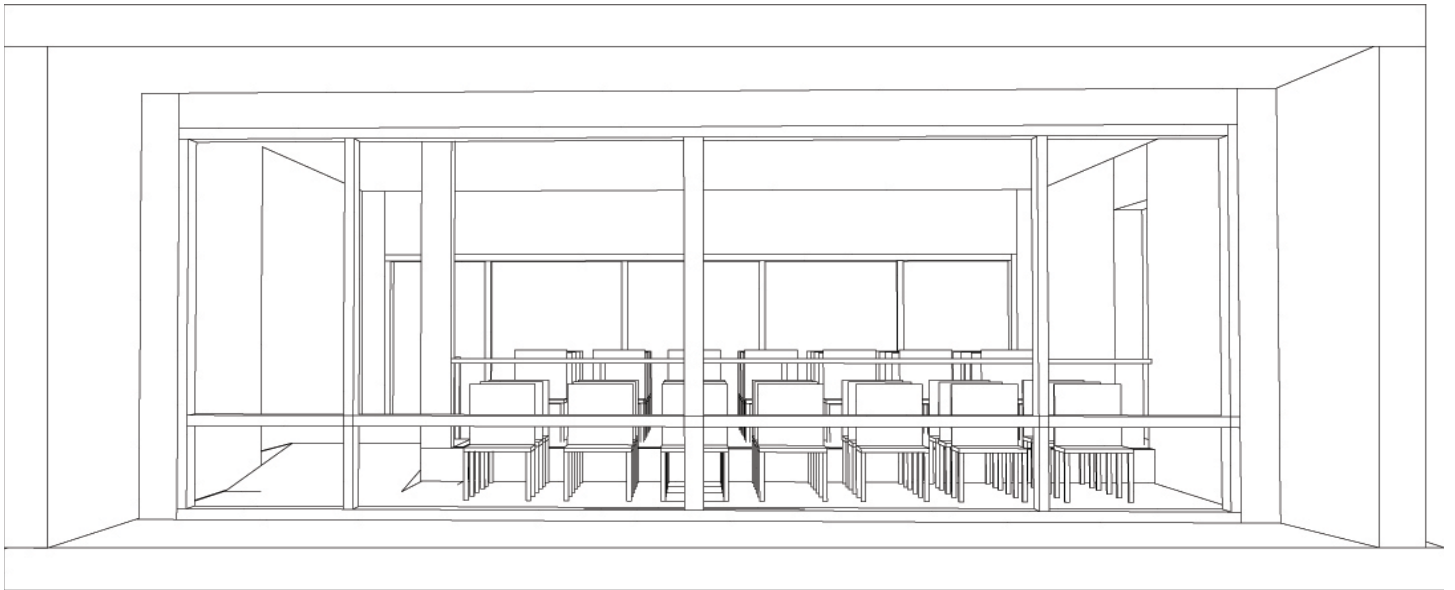
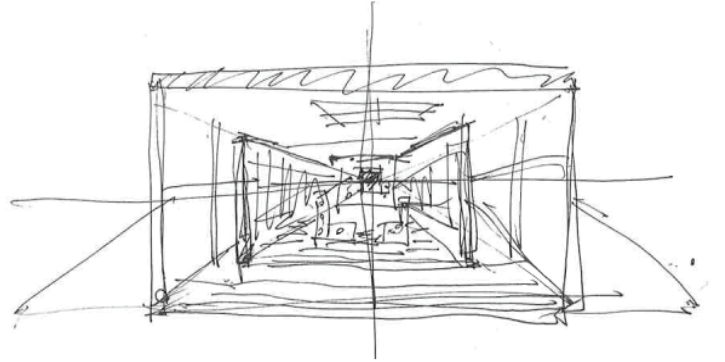
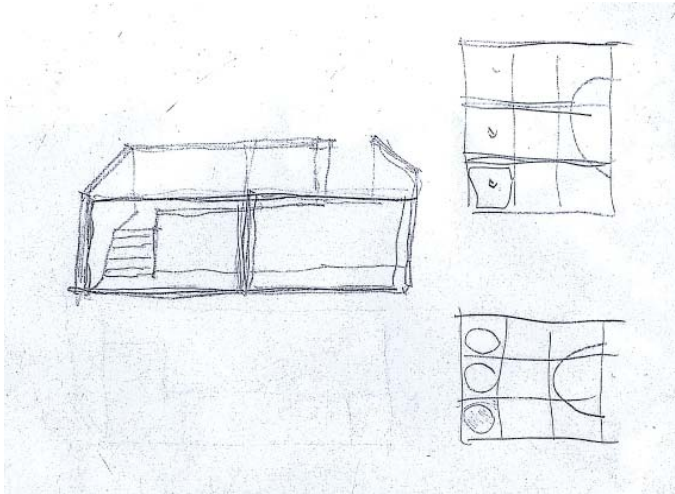
LECTURE HALL

Final acceptance and looking forward

OPPOSITE: Rokko Chapel, Kobe Japan. Architecture by Tadao Ando. Photo by author. This space is Ando's conclusion to a architectural sequence of stages, as described by Gunter Nitschke in [From Shinto to Ando](#).¹

The lecture hall is the conclusion to the sequential experience of the center. Similar to coming to terms with one's illness, it embodies the end (or the beginning) of a sequence, the eventual understanding or acceptance of one's place on earth while nudging the inhabitant to contemplate their next stage of life. If moving through the center's sequence of spaces were paralleled with the mental processes of coping with cancer, the entrance procession is for personal reflection and pause, the inner courtyard for group support, and the lecture hall is the eventual coming to terms and acceptance. It is a group space, but ultimately it has an intimate feel as this is a revelation that one can only come to individually.

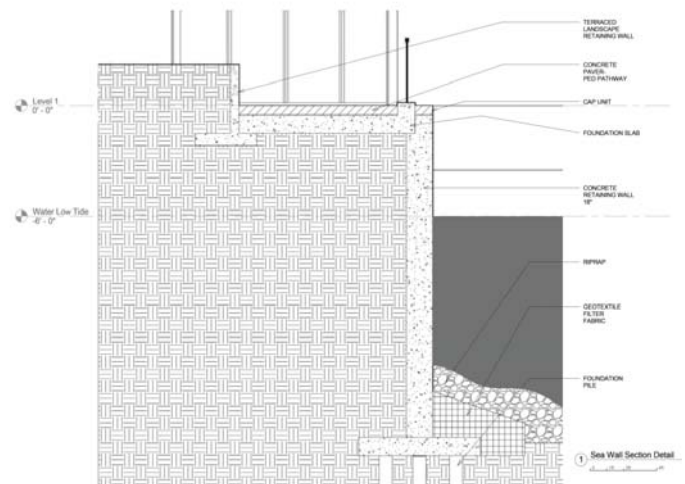
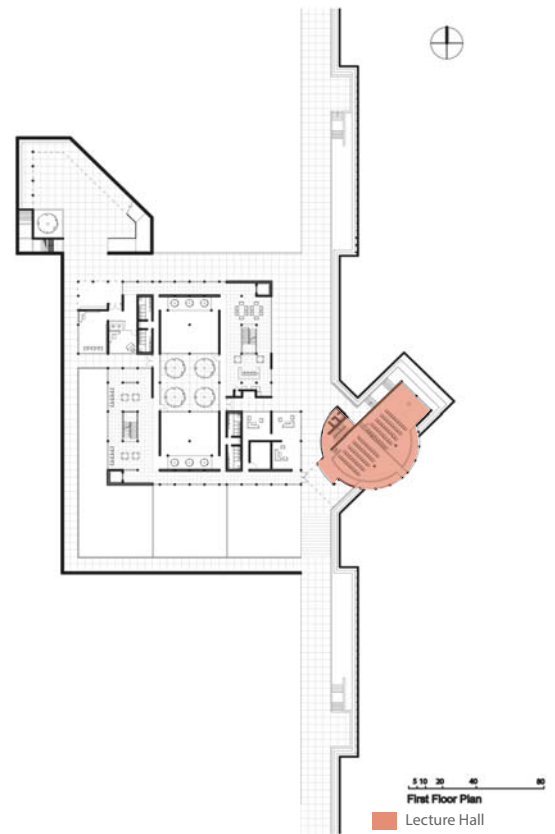




Everything about this space is unique in to the rest of the facility. Juxtaposed against the East-West parallel orientation that the rest of the center follows, this space is angled North-East, breaking from the shore line and protruding into the water. This was a conscious design decision. In addition to contrasting this community space with the non-angled others, orienting the lecture hall North-East places the space in line with the rising sun of the summer solstice (June 21st/22nd) This is the date every year in which we receive maximum sunlight. It is also the date in cosmological terms in which we shift from Gemini to Cancer. Ancient healing and religious architecture including the Pyramids at Giza and Stonehenge were oriented towards this event. It is hoped that such an orientation makes one aware of their place in the history of humanity, as well as providing illumination and self realization that much of what we accept as 'the way things are' is external and disparate from how we choose to live and experience our world.

Architectural features also distinguish the hall from the previous spaces. If experience of the Center has been a sequential experience of 'stages', then one has been gradually experiencing these stages in a downward progression. Beginning with the entrance procession's steps or ramp down to the building's entrance, now in the final stage we descend again, this time to the shores edge, and then out onto the water. We have been moving from above to below, and now that we are at the center's culmination and lowest point, we realize that factors external to people and rooted in nature actually set the lowest point (high and low tide). As seen in the building section, fluctuating water elevation levels determine how the lecture hall relates to the Potomac River it extends out over.

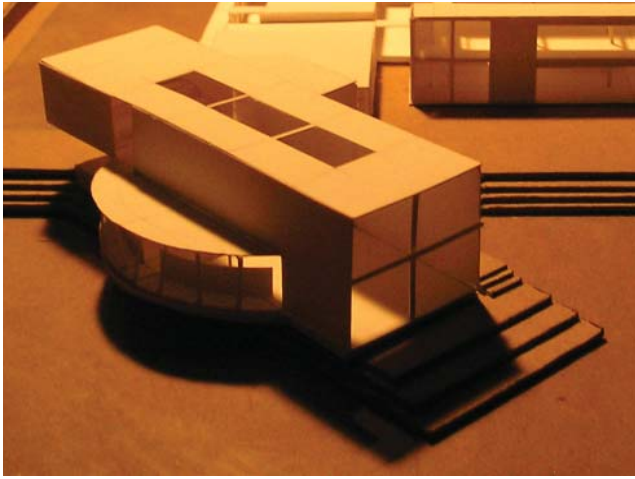
In a further effort to distinguish this space from others, the lecture hall contains a curve that wraps around the extruded rectangular form and provides circulation for those progressing down into the space. This provides a panoramic view of the river, as well as allowing in natural light. Early version of the lecture hall did not feature it in such a prominent manner. Early iterations articulated it without the curved component and NE orientation of a rectangular extrusion, culminating in a floor to ceiling store front glass wall with an unobstructed view of the river. Once it became clear that the lecture hall needed to be the most 'sacred' of spaces within the center, it's design took it's present form.



OPPOSITE (ABOVE): Early sketches of the lecture hall as an extruded rectangle with a ramp for circulation downwards and floor to ceiling store front glazing.

ABOVE: Location of the lecture hall in first floor plan.

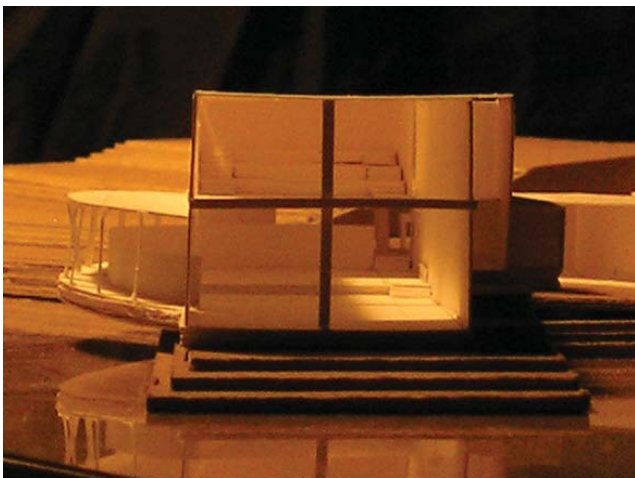
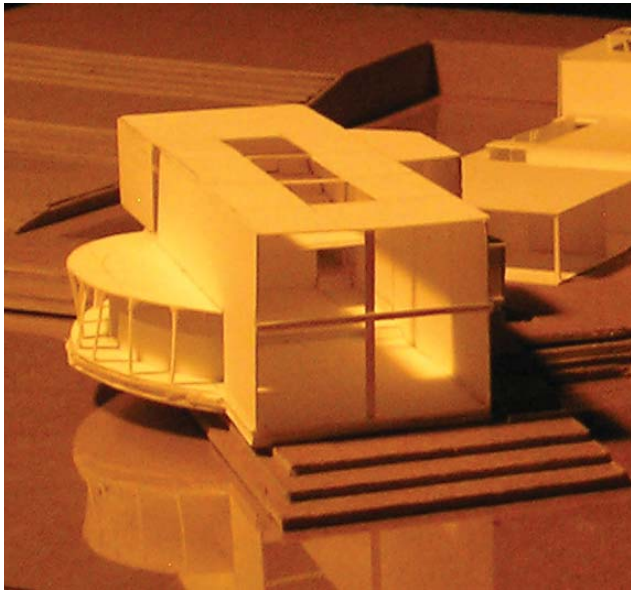
BELOW: Section detail of the sea wall where the Center meets the water's edge.



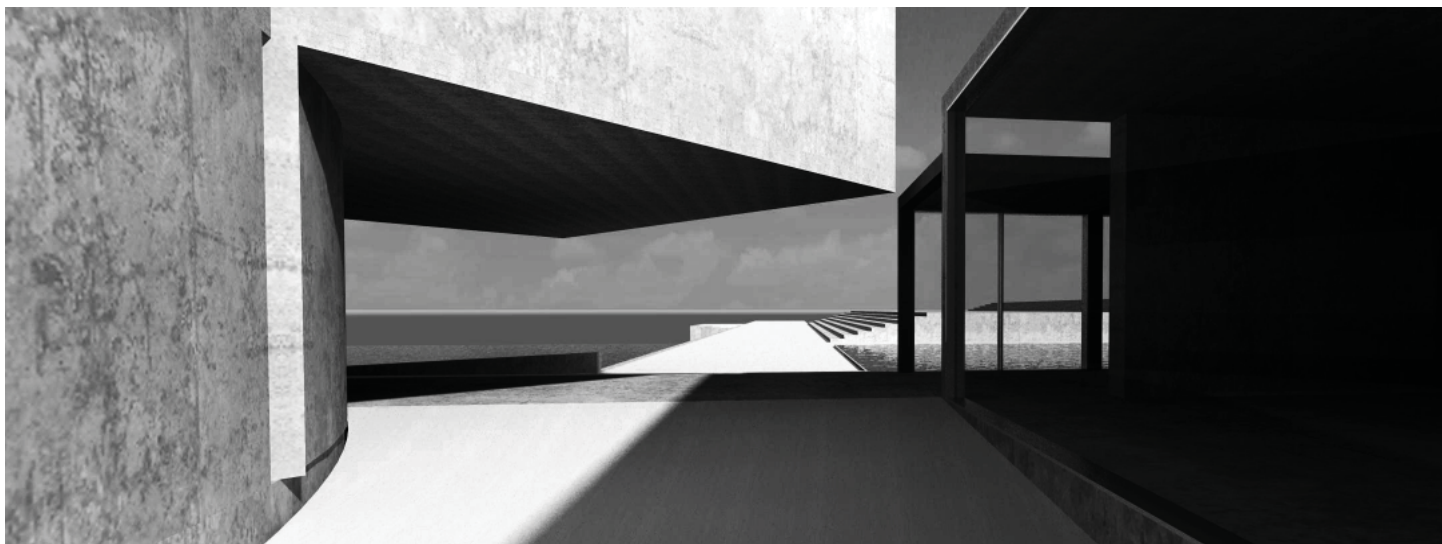
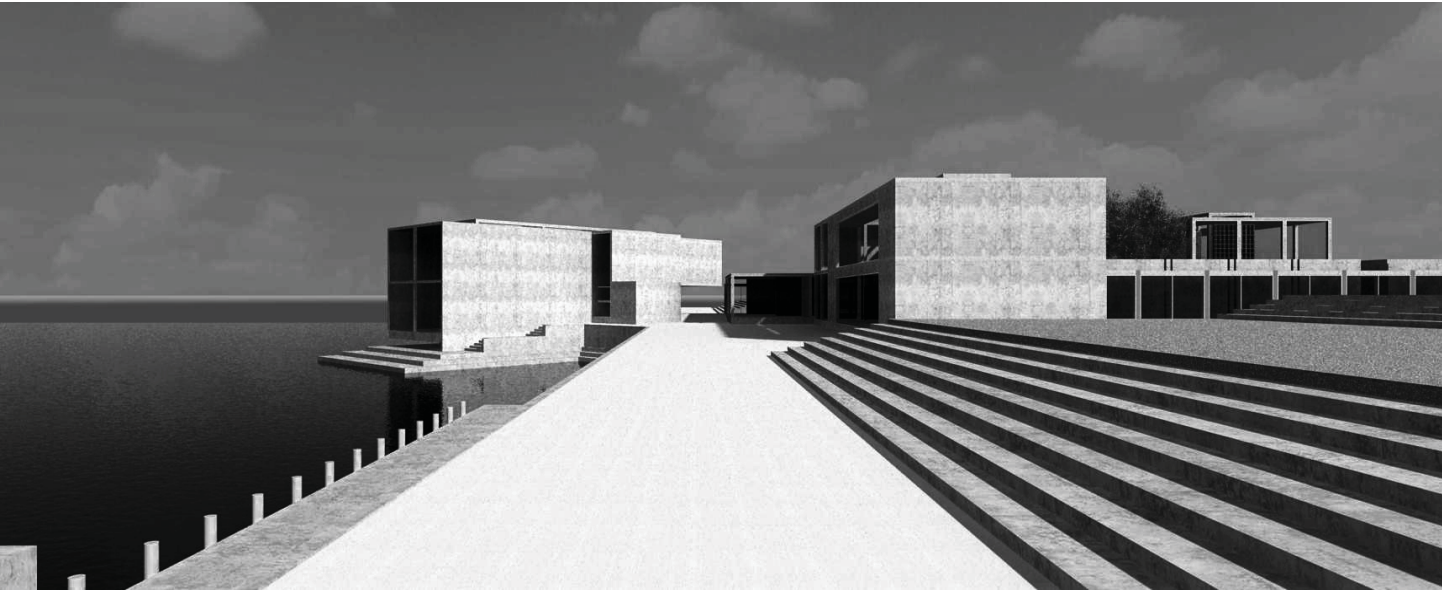
Similar to Sen no Rikyu's teahouse on the Inland Sea, or Tadao Ando's chapel on Mount Rokko, the lecture hall is the conclusion to a sequential experience of space, the climax of a building that reveals itself in stages; each stage further facilitating one's understanding of life and death with cancer. The lecture hall is the moment of final acceptance, as well as a self-propelled moment of change.

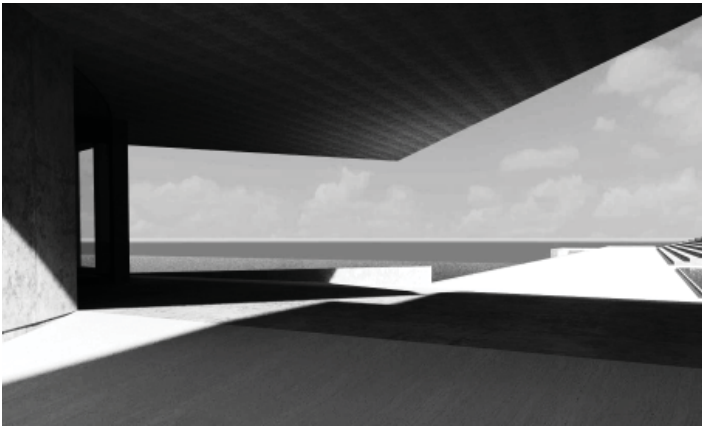
NOTES

1. Understanding and inspiration of this building as a 'sequential experience of space' in stages was largely influenced by Gunter Nitschke's article titled *'Time is Money, Space is Money'* published in his book, *From Shinto to Ando*. In this writing, he describes the various stages in which one 'arrives' to the traditional Japanese temple of Shisen-do (Kyoto Japan), and then relates these techniques to those used by Tadao Ando in his design of the Rokko Chapel (Kobe Japan 1986). Having had an opportunity to visit and photograph this building, its design and themes were particularly influential in not only the design of the Center's lecture hall, but in the overall experience of the Center's spaces.



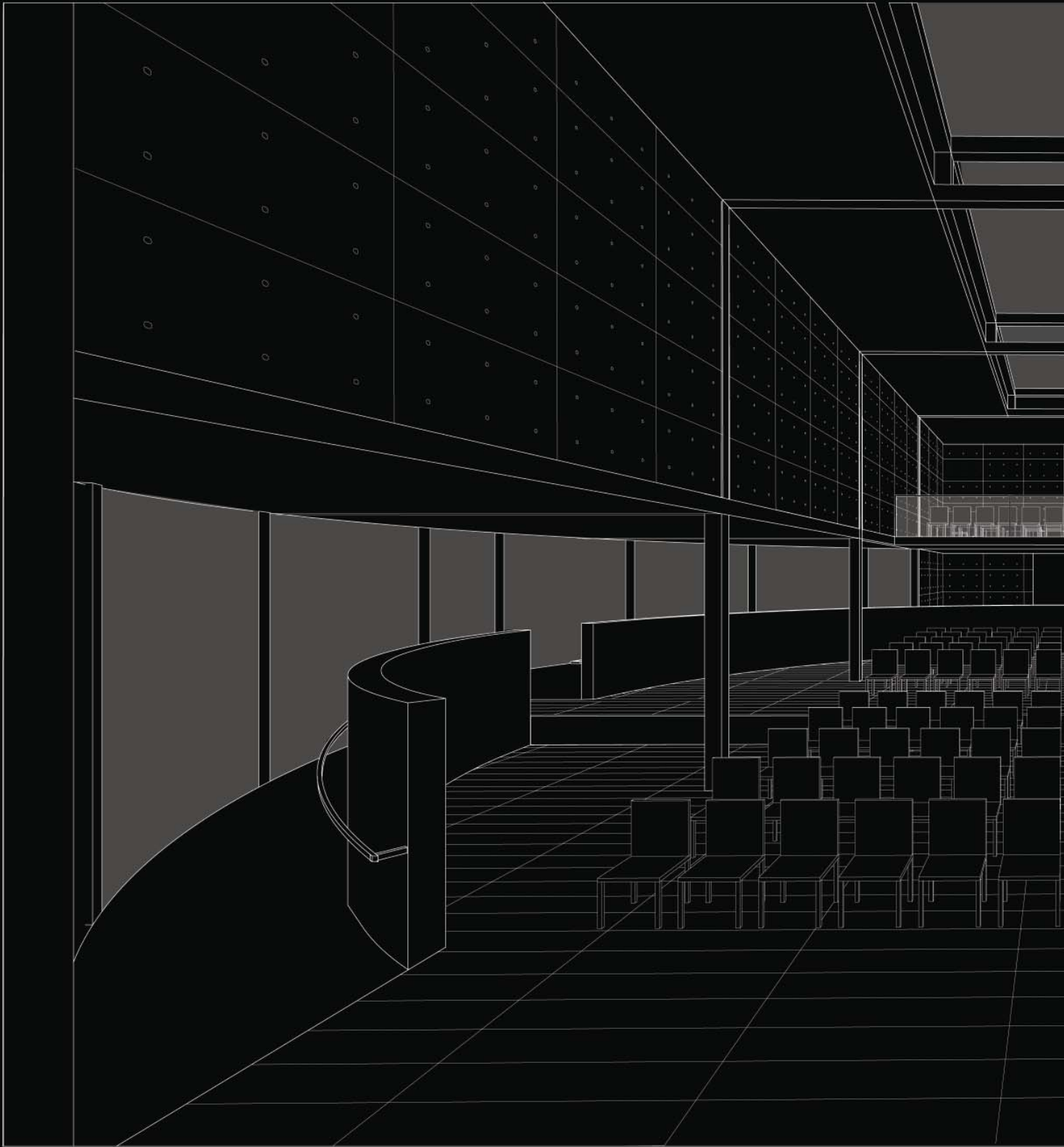
ABOVE: Model photos of the final version of the lecture hall
OPPOSITE: Revit preliminary renders, approaching lecture hall from the North direction







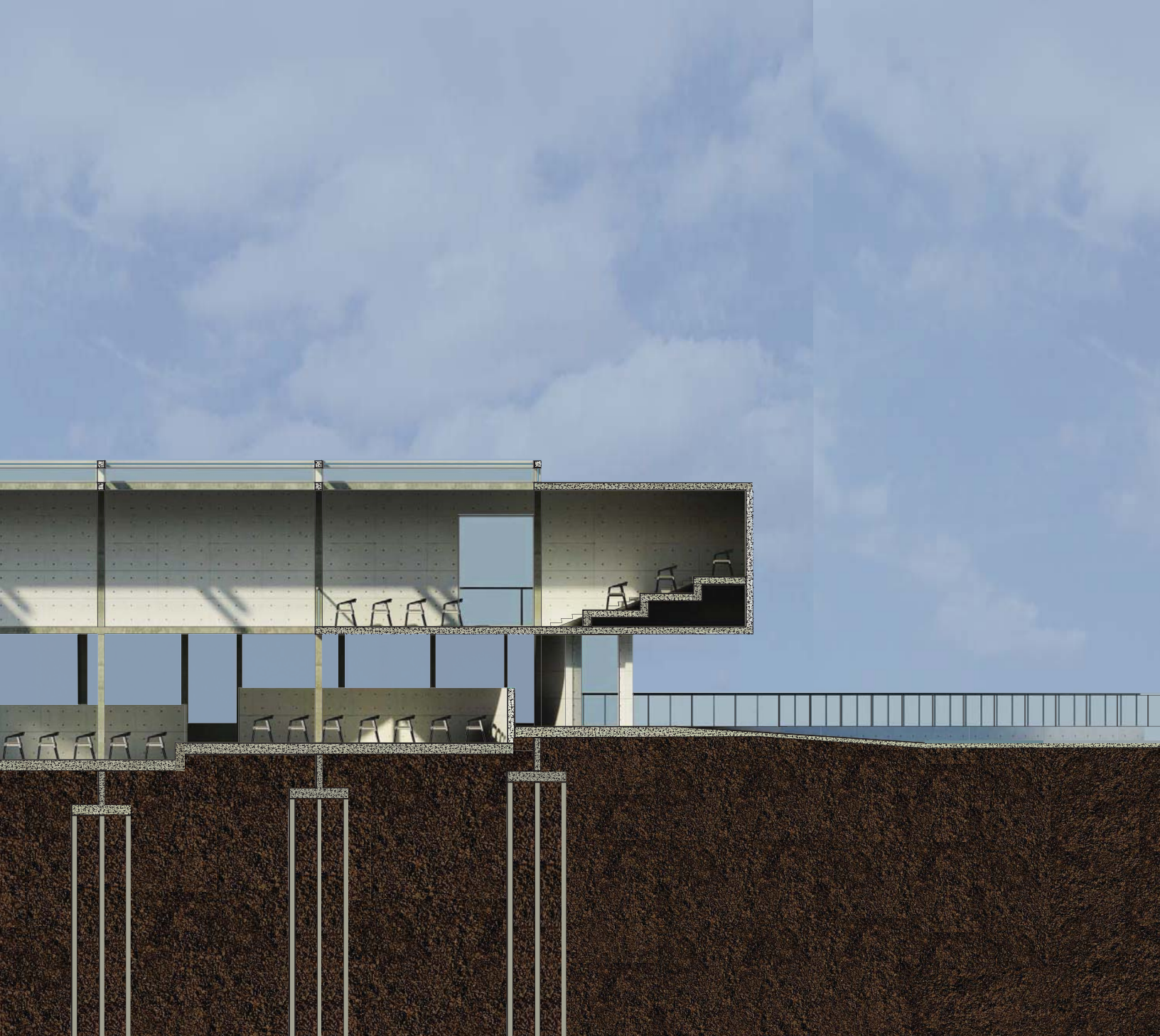
OPPOSITE (ABOVE LEFT): Revit preliminary render, space underneath lecture hall cantilever
OPPOSITE (ABOVE RIGHT): Revit preliminary render, looking down corridor at lecture hall entrance
OPPOSITE (BELOW): Revit preliminary render, approaching lecture hall from South direction
ABOVE: Revit preliminary render, approaching lecture hall from South direction





LECTURE HALL PERSPECTIVE





*PREVIOUS PAGE: Perspectival drawing of lecture hall, looking back towards the entrance from the large, river facing window.
ABOVE: Revit render with illustrator line work, Lecture Hall section
FOLLOWING PAGE: Revit render, Lecture Hall*





CONCLUSION

Towards a Transcendental Architecture

This thesis investigates issues within health care architecture, architecture that is often sterile and devoid of character. In the process, it has grappled with fundamental architectural questions not only applicable to health care, but all types of architecture; the interior versus the exterior, interaction with nature, the role of the site, public and private spaces, human scale and proportion, the role of procession into and through a building. It has become clear that these topics are the very foundation of significant architecture, and what *"...makes us experience ourselves as complete embodied and spiritual beings."*¹

Throughout the process, the precedent of the Japanese teahouse played a critical role. Of the themes present within the teahouse, the technique of creating a sequential experience of space was influential. This breakthrough of thought can be largely credited to the work of Gunter Nitschke, and his analysis of Japanese spatial techniques used to slow down perception of time and heighten awareness of our surroundings.²

This building therefore is one of stages, where the inhabitant (at their own pace) moves from one orchestrated space to the next, with each having a desired mental or emotional effect. Not dissimilar from the Kubler-Ross model of stages of grief, this Center uses a sequence of spaces to instill feelings of personal reflection and contemplation, group consolation, and final acceptance. As demonstrated by the physical organization of the building as well as its discussion within the body of this text, these three mental stages or processes correspond with the architectural spaces

of the Entrance and Outer Courtyard (personal reflection), the Inner Courtyard (group consolation), and the Lecture Hall (final acceptance).

While the building's final form may read as linear, the design process was quite circuitous. As ideas took form, these new developments necessitated returning to previous portions of the building to alter and manipulate them. This project was essentially designed twice; first with an understanding of the kinds of spaces desired but without developing how these spaces related to each other, and a second time using those already outlined spaces, but in a rational sequence that parallels the internal process one goes through as they accept their life with cancer.

The impetus for this sequential understanding was the Lecture Hall. Not only is it the culmination of the physical and mental stages one encounters, but it is also the full expression of a thought about how space carefully oriented in relation to other building components and its external environment can have a transcendental effect on the inhabitant. From the start, this was always the desired effect I envisioned the Center to imbue on its visitors. If one space accomplishes this, it is undoubtedly the Lecture Hall.

It is my hope that through an investigation such as this, architects can begin to understand the far reaching experiential consequences of their constructions, and the therapeutic potential that thoughtful design can have upon an inhabitant.

NOTES

1. Pallasmaa, Juhani, *The Eyes of the Skin*, John Wiley and Sons Press (England), 2005, pg 11.
2. Nitschke, Gunter. From *Shinto to Ando: Studies in Architectural Anthropology in Japan*. Academy Editions Press (London) 1993,

BIBLIOGRAPHY

Ando, Tadao and Chaslin, Francois. Tadao Ando: minimalisme. Electra Moniteur Press (Paris), 1982.

Ando, Futagawa, Yukio, ed. GA Architect 16: Tadao Ando Vol 3 1994-2000. A.D.A. EDITA Press (Tokyo) 2000.

Bognar, Botond. Contemporary Japanese Architecture: It's Development and Challenge. Van Nostrand Reinhold Press (New York) 1985.

Cousins, Norman. Anatomy of an Illness as Perceived by the Patient. W.W. Norton & Company (New York), 1979.

Crouch, Dora and Johnson, June, Traditions in Architecture. Oxford University Press (London), 2001.

Dal Co, Francesco. Tadao Ando: The Complete Works. Phaidon Press (London) 1997.

Tadao Ando, 'From Self Enclosed Modern Architecture Towards Universality' in The Japan Architect 301 May 1982

Tadao Ando, 'A wedge in Circumstances' in The Japan Architect, 243, June 1977

Tadao Ando, 'Spatial Composition and Nature' in El Croquis, 44, 1990.

Frampton, Kenneth. Richard Meier: Architect 1985/1991. Rizzoli Press (New York), 1991.

Freeman, Michael. The Modern Japanese Tea Room. Damiani Press (Italy) 2007.

Isozaki, Arata and Fujimori, Terunobu. The Contemporary Tea House: Japan's Top Architects redefine a tradition. Kodansha International Press (Tokyo), 2007.

Isozaki, Arata. Japan-ness in architecture. MIT Press (Cambridge) 2011.

Heathcote, Edwin. Article title "Building Hope" taken from the Financial Times Newspaper, Sunday December 18th 2011.

Jencks, Charles and Heathcote, Edwin. The Architecture of Hope: Maggie's Cancer Caring Centers. Frances Lincoln Limited Publishers (London), 2010.

Kuma, Kengo. Breathing Architecture: The Tea House of the Museum of Applied Arts. Birkhauser Architecture Press, 2008.

- Kurokawa, Kisho. Intercultural Architecture: The Philosophy of Symboisis. Academy Editions Press (London) 1991.
- Mann, Thomas. The Magic Mountain. The Modern Library Press (New York), 1929.
- Nishi, Kazuo. What is Japanese Architecture? Kodansha Press (Tokyo) 1985.
- Nitschke, Gunter. From Shinto to Ando: Studies in Architectural Anthropology in Japan. Academy Editions Press (London) 1993.
- Okakura, Kakuzo. The Book of Tea. Dover Publications (New York), 1964.
- Palasmaa, Juhani. The Eyes of the Skin: Architecture and the Senses. John Wiley and Sons Press (England) 2005.
- Rasmussen, Steen Eiler. Experiencing Architecture. MIT Press (Cambridge), 1959
- Suzuki, Shunryu. Zen Mind, Beginner's Mind. Shambhala Press (Boston) 1970.
- Tanizaki, Junichiro. In Praise of Shadows. Leete's Island Books Press (Stony Creek, CT) 1977 (translation)
- Walker, Robin. A Late Medieval Daimo Sukiya Style Japanese Teahouse. Routledge Press, 2002.
- Weil, Andrew. Spontaneous Healing. Ballantine Books (New York), 1995.
- Xinian, Fu. Chinese Architecture. Yale University Press (New Haven and London), 2002.

LIST OF IMAGES

All images and photographs copyright of author unless otherwise noted.

All images not attributed to the author are cited as such and are reproduced under the “Fair Use Doctrine” for one time use for educational purposes and are not for publication.

Pg 3. Top photo. Photo of Red Cross War Memorial Children’s Hospital Cape Town, South Africa. Photo from Wikipedia (https://en.wikipedia.org/wiki/Red_Cross_War_Memorial_Children’s_Hospital) posted Jan 12 2011 and authored by ‘Htonl’. Accessed 7/5/2015. This file is licensed under the Creative Commons Attribution-Share Alike 2.0 Generic license and free to share.

Pg 3. Middle photo. Photo of Epidaurus Theatre, Greece. Photo from Wikipedia (https://commons.wikimedia.org/wiki/File:07Epidaurus_Theater05.jpg) posted June 7 2007 and authored by ‘Fingalo’. Accessed 10/12/2015. This file is licensed under the Creative Commons Attribution-Share Alike 2.0 Germany license, and free to share.

Pg 3. Bottom photo. Jo-an Teahouse, built by Oda Uraku (1620). Photo by Michael Freeman and taken from The Modern Japanese Tearoom by Michael Freeman, pg 17.

Pg 9. “*Landscape in the style of Yan Wengui*” painting by Chinese artist Dai Jin (1388-1462). Image from wikipedia website (https://en.wikipedia.org/wiki/Dai_Jin) posted September 5th 2015, accessed 10/12/2015 and considered public domain.

Pg 10. Top photo. Jo-an tearoom, Inuyama, Japan. (1618) Built by Oda Uraksuai, disciple of Sen no Rikyu. Photo by Akihisa Masuda and taken from The Contemporary Teahouse by Terunobu Fujimori, pg. 17.

Pg 11. Top drawing. Reconstruction of Fushin-an, 4.5 mat tea room built by Sen no Rikyu. Illustration by Masao Nakamura and taken from The Contemporary Teahouse by Terunobu Fujimori, pg. 13.

Pg 11. Bottom drawing. Reconstruction of Juraku residence, 2 mat tea room built by Sen no Rikyu. Illustration by Sutemi Horiguchi and taken from The Contemporary Teahouse by Terunobu Fujimori, pg. 13.

Pg. 13. Plan of the Shoko-Ken tea house Kyoto Japan. Illustration by Robin Walker, taken from A Late Medieval Daimyo Sukiya Style Teahouse by Robin Walker, pg 112.

Pg 14. Top and middle photo. Photo of entrance to Gallery-no-ie garden Nara, Japan. (2004) Photo by Michael Freeman, taken from The Modern Japanese Tea Room by Michael Freeman, pg.178.

Pg 14. Middle photo. Photo of entrance to Ryogo-tei garden Osaka, Japan. (1995) Photo by Michael Freeman, taken from The Modern Japanese Tea Room by Michael Freeman, pg. 175.

Pg 16. Top photo. Drawing of basic tearoom components and their appropriate scale. Drawing by Terunobu Fujimori, taken from The Contemporary Teahouse by Terunobu Fujimori, Pg. 131.

Pg 16. Middle photo. Axonometric drawing of Taian teahouse. Drawing by Kazuo Nishi, taken from What is Japanese Architecture? by Kazuo Nishi.

Pg 16. Bottom photo. Axonometric drawing of Tea House for Soseikan-Yamaguchi House Extension, Hyogo, Japan 1982. Design by Tadao Ando, drawing by Tadao Ando, taken from The Contemporary Teahouse by Terunobu Fujimori, pg. 73.

Pg 21. Photos of traditional and contemporary tearoom materials. Photos by Michael Freeman, taken from The Modern Japanese tearoom by Michael Freeman, pg. 80, 106.

Pg 24. Aberdeen Maggie's Center, Aberdeen UK. Render from Dezeen Architecture website, published 12/22/2011. <http://www.dezeen.com/2011/12/22/snohetta-unveil-proposals-for-maggies-center-in-aberdeen>. Render provided by Snohetta Architects, website accessed on 10/28/2013.

Pg 27. Fife Maggie's Center, Fife UK. Photos and elevations from Architecture of Hope, pg. 127, 128.

Pg 28. Fife Maggie's Center, Fife UK. Photos from Architecture of Hope, pg. 125, 132.

Pg 29. Aberdeen Maggie's Center, Aberdeen UK. Renders from Dezeen Architecture website, published 12/22/2011. <http://www.dezeen.com/2011/12/22/snohetta-unveil-proposals-for-maggies-center-in-aberdeen>. Renders provided by Snohetta Architects, website accessed on 10/28/2013.

Pg. 30. Aberdeen Maggie's Center, Aberdeen UK. Plan and section from Dezeen Architecture website, published 12/22/2011. <http://www.dezeen.com/2011/12/22/snohetta-unveil-proposals-for-maggies-center-in-aberdeen>. Drawings provided by Snohetta Architects, website accessed on 10/28/2013.

Pg. 31. Gartnavel Maggie's Center, Gartnavel UK. Axon and elevation taken from Architecture of Hope, pg. 183, 185.

Pg. 31. Gartnavel Maggie's Center, Gartnavel UK. Photograph from Dezeen Architecture website, published 10/5/2011. <http://www.dezeen.com/2011/10/05/maggies-gartnavel-by-oma>. Photograph by Philippe Ruault, website accessed on 10/28/2013.

Pg. 32. Gartnavel Maggie's Center, Gartnavel UK. Four photographs from Dezeen Architecture website, published 10/5/2011. <http://www.dezeen.com/2011/10/05/maggies-gartnavel-by-oma>. Photographs by Philippe Ruault, website accessed on 10/28/2013.

Pg. 77. Lu Xun Chinese courtyard House, Beijing China. Photograph from Chinese Architecture, pg. 303.

Pg. 78. Axonometric drawing of Chinese courtyard house. Drawing from Chinese Architecture, pg. 302.